ECONOMICS

PRINCIPLES AND INTERPRETATION

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PREFACE

Economic principles, or theories, are nothing else than explanations of economic life. It is the function of the theorist to analyze the product of scientific investigation and to interpret economic activity in the light of the knowledge thus gained. It is his business to formulate and systematize those generalizations that will be most useful and important in coming to an understanding of the social relations involved in the satisfaction of wants.

Theory, thus, is dependent upon scientific research, and the latter serves its full purpose only when it is made to yield generalizations of value. The two are indispensable and inseparable. It is obvious, then, that economic theory must keep pace with the progress made in economic research and must constantly strive toward perfection of method and result if it is to contribute its proper share to the development of the science and to the understanding of economic life. The theorist of today will fail in this endeavor if he contents himself with an occasional restatement of the gleanings out of historic dogma which still have currency. He will be scarcely more successful if he attempts to piece together in their entirety the so-called orthodox theory and the new knowledge. He can perform his proper function, it seems to me, only by bringing the principles of economics into conformity with the life about him in so far as our knowledge of that life permits, and this can be done only by fusing into unity all that is found to be true both in that which is old and well established and in that which is newly offered for his acceptance.

The foregoing remarks are not intended as an appeal for progress in economic theory. Such an appeal is unnecessary and would be out of order in the presence of those to whom these words will come. But, because it is a fact that tradition sometimes governs thought, even in a science of changing activities, I have thought it well to set forth the considerations which have been kept in mind as a safeguard against the errors of traditionalism in the preparation of this treatise. This book is intended to present the science of the economic life of the present day—or at least to play a part in the formulation of a body of economic principles

more complete and more in conformity with modern life than the pronouncements of fifty and one hundred years ago which are still so widely taught could possibly be.

In the preparation of these chapters, I have endeavored simply to approach critically the great mass of economic fact now available for use with a view to its scientific interpretation and systematization. I have made an effort to draw upon every useful source of fact and principle for the purpose of making the treatment of the subject in hand as broadly eclectic as so comprehensive a treatment should be. Some doctrines of the "orthodox economy" I have rejected as fallacious. Others I have omitted as of no significance in the circumstances of our times. Many of them, on the other hand, have been accepted as of undoubted validity. A similar selection and rejection of theories of recent date will be evident to those who are familiar with the latest theoretical discussion. The net result is that the substantive changes in fundamental theory which have been incorporated in this statement of economic principles are few in number, whatever may be their importance, and the new elements introduced into theory are, I think, only such as are now widely accepted. There has been no invention, even of phraseology, for the mere sake of invention, and the familiar terminology has been used wherever it is applicable. I am inclined to think that this treatise is to be distinguished from others in the field as much by reason of the delineation of the scope of the science, the selection and arrangement of the subject matter, and the plan of functional systematization, which are its foundations, as by the revision of fundamental principles which it contains.

This book is addressed to all members of economic society who are disposed to be students and to all students who regard themselves as members of economic society. The discussion is planned to meet especially the needs of those who are undertaking the serious study of economic principles for the first time. While it is in a sense, therefore, a book for beginners in theory, it is not a book for the youngest beginners nor for the very immature. I have aimed to present the subject with such completeness that the book may be useful to those who are to carry the study no further. These, I hope, may gain from these pages a comprehensive view of the field. The same completeness seemed to me to be necessary also if the book were to meet the needs of those who were to con-

tinue the study of economics, for all but a very few will confine their attention later to limited parts of the field.

No preliminary knowledge of economic life, other than that which can be gained by the most casual observation, should be and is expected of the majority of those for whom these chapters are planned. Even the most experienced among us are often unfamiliar with the detail of affairs with which we have no regular contact. The basic and elemental facts necessary to an understanding of each economic activity presented are given, therefore, I think, in every case. It has been my intention that the book should be laden with fact and should contain that descriptive material the absence of which has constituted so great a handicap to beginners in theory.

But it is very easy to burden a book of this sort with unnecessary detail. I consider the purpose of a treatise on general principles to be the interpretation for the most part of established fact. Such a treatise can deal generally only with the most fundamental of such fact; it cannot well be a revelation of all that has been learned of economic life. I have avoided, therefore, almost all compilation of fact for its own sake. While some statistical material has been introduced for specific purposes, and incidentally to suggest the method of quantitative measurement, no very extensive use has been made of statistical tables. Few of those who are expected to read this book are prepared for, and equally few are reconciled to, the use of tables for illustrative purposes. Tables of fact, furthermore, must be used with extreme care if they are not to disrupt the plan of spatial emphasis. They tend to divert attention to detail which is relatively unimportant in a discussion of principles.

An effort has been made to make the expository treatment of the subject as clear as possible and as simple, generally, as the ideas presented would permit. However, some degree of initial interest and some measure of studious purpose seems almost necessarily to be expected of those that read a scientific treatise. No literary artifice can so deceive the reader as to carry him through scientific analysis unconscious of its rigor unless he be so uncomprehending as not to profit by his experience. Very few beginners will find the subject of economics as presented here beyond their comprehension, I believe, but it is a part of the plan of this work to challenge the thought and attention of capable minds. I have made no concession to the occasional college or university student

who hopes to achieve the "honors, dignities, and privileges" of an education while avoiding the education itself nor to those students whose bodies have been trapped in a course in the principles but whose minds refuse to be ensnared.

In the present state of the science of economics, there is no possibility of entirely avoiding controversial topics. Capable students of the subject commonly introduce controversy where the author attempts to gloss over uncertain principles without suggesting doubts. In any event, there seems to me to be a great pedagogical gain in revealing to the student from the beginning that the conclusions of the scientist are neither unalterable in his own mind nor unimpeachable from without. So to introduce controversies as to lead to confusion of thought or to carry the discussion beyond the proper bounds of the task in hand is an error, of course. But an occasional unsettling or inconclusive discussion may be an incentive to thought. In this connection it may be well to add that in dealing with controversial matters I have been conscious of the presence of the economists, to whom, after all, all such treatises as this are addressed in part.

I wish to acknowledge my indebtedness to all those whose contributions, accumulated through the years or recently added to the fund of knowledge, are so largely the foundation of the science of economics. I owe something also to my students, who, in numerous classes in the principles of economics and in special divisions of the field, have done much to induce this labor and suggest its proper objective. Professor Lucius Walter Elder, of the Department of English of Knox College, accompanied me throughout the preparation of the treatise with corrections and suggestions both as to thought and composition. Professor James Andrew Campbell, my colleague in the Department of Economics at Knox, read the entire manuscript, and I was privileged to draw at many points upon his knowledge of business practice. Professor Carl William Strow, also my colleague in Economics at Knox, read the manuscript and gave me helpful advice. I am indebted especially to Professor Clyde W. Hart, of the University of Iowa, for many suggestions before the preparation of the manuscript began and for thorough and helpful criticism of the completed work. Professor Gordon S. Watkins, of the Southern Branch of the University of California; Professor Richard N. Owens, of Emory University; Professor Fred E. Clark, of Northwestern University; Professor

Eliot Jones, of Stanford University, and Professor C. O. Hardy, of the Institute of Economics, Washington, D. C., each read sections of the manuscript, made corrections, and pointed the way to improvement. I am very deeply under obligation to them. Of course, none of those who have thus so generously assisted me is to be assumed to have approved in full or to be in any way responsible for that which this book contains.

ROY E. CURTIS

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LIFE in its economic phases is everyone's affair. It is the affair, not only of the manufacturer, the merchant, and the banker, but also of those who labor in workshop, store, or office. It is the concern of all those who make and sell goods and of everyone who buys or uses goods for any purpose whatsoever.

There are many not often associated in thought with economic activity who have a part in that activity nevertheless. Some of these are producers and consumers of services rather than of goods. Others are concerned with goods of an exceptional order. The lawyer, the teacher, and the physician are producers of services and, together with the people that make use of such services, are involved in economic affairs. The artist is a producer of exceptional goods. To create a work of art, as a painting or an opera, to contribute to the support of the artist by buying that which he creates, or simply to receive the benefit of his creative labor is to have a part in economic life.

Even those seemingly far removed from the problem of making a living and who have no part in business, as that word is commonly used, are participants in, and beneficiaries of, this same activity. Children, as well as those upon whom falls the burden of their support, and the man of leisure, as well as the producer whose labor creates the fortune that makes leisure possible, are at least consumers of goods and services. In fact, unfamiliar as many are with the principles of economics, there is no one who has not had some part in the activities which those principles are intended to explain.

Those who enter upon the study of economics with us at this point will find themselves, therefore, to some extent on familiar

ground throughout, whether they are experienced or inexperienced in the world of affairs. In the knowledge of that fact there should be some reassurance for those who approach the subject as strangers and with misgivings. The same fact should give the study we are about to undertake an added import to those who are conversant with the practices of business. Both should find some profit in viewing, as they will at times, the activities of their own daily lives from new angles and in the light possibly of a greater knowledge of those activities than they have had before. They will not meet with frequent introductions to strange phenomena and novel ideas, but they will be confronted from time to time with certain prevalent experiences of life in new aspects and may expect a better understanding of things commonly observed and often not fully comprehended.

A SCIENCE OF MODERN LIFE

We are to concern ourselves, in the pages to follow, with our own immediate affairs to a greater extent even than the preceding paragraphs have indicated. We shall dwell hardly at all upon the activities of the peoples of former times. It will not even be possible to base our statement of economic principles upon ancient or long-established doctrine.

That the very principles of economics are so new is a matter that would occasion no surprise if economics were a science treating of things which had only recently been brought to man's attention. But, as we well know, the art of making a living is not a thing of recent invention. Neither is organized economic activity something peculiar to modern nations. History does not disclose the time when business affairs were conducted without plan and the combined efforts of many people. The study of primitive tribes today suggests such a thing only as a very remote possibility among prehistoric races. From time immemorial, it seems, savages have united in the labors of hunting and fishing, have divided among themselves the duties of the camp, have cooperated in many ways in the promotion of tribal interests, and have apportioned the gains of their labor according to some recognized rule. Our barbarian ancestors in Europe and elsewhere conducted trade as far-reaching as the continents on which they lived. The civilized nations of the early days of western history

undertook extensive public works, regulated to some extent the economic activities of the people, and even protected themselves against famines by establishing storehouses in which to accumulate supplies. There is thus every evidence that the supervision of practical affairs long ago had been the object of thoughtful attention and had attained a high degree of development.

There happens to have come down to us, however, no record of this early thought and practice sufficient to form the foundation of a science of economics. For that matter, the statement of economic principles needs to be so fitted from time to time to the changing life and new institutions of the people that the very scientific conclusions which were useful in one civilization would be only imperfectly applicable in another. The problems of the nomadic Israelites, of the feudal states of medieval Europe, and of the colonists of early America were obviously very different. The principles of economics, therefore, while fundamentally the same for all climes and nations, are to be stated in terms of our own times and affairs and are to be adapted even to the conditions of life in our limited part of the world.

THE LANGUAGE OF ECONOMICS

Our study is to begin with a brief explanation of certain terms which express elementary economic ideas. However, we shall not find available for our purposes a vocabulary having the sanction of universal usage, and some of the words which we shall attempt to define will be found to have more than one possible meaning. The economists have not been permitted to create a language to be kept separate, and sacred to their own use (as have the biologists, the chemists, and others), for they deal with the everyday affairs of all the people and are engaged in explaining matters which are to be stated only in the common language of the people.

This lack of a scientific vocabulary places the economist at some disadvantage in expressing economic ideas and leads to some disagreement among people as to the proper statement of economic principles. It would increase, rather than remove, difficulty, however, to invent names and create new phrases likely to be taken over into common speech in the course of a day. We shall need, therefore, to define old words and phrases and attempt to rescue the terminology of business at some points from the

vagueness and confusion of varied and careless use. It is a part of our task to use old tools with new precision.

To a limited extent, we shall make use of ancient words which remain true to their origins. The very name of the subject in hand is one of the most ancient and one which may be defined now much as it was defined in the beginning. We do not often have occasion to refer to the contributions of Greece to the economic development of the world, but we have received from the language of Greece, at least, the word "economy."

ECONOMY DEFINED

Economy means management. Originally it denoted the management of the household and, particularly, the rules and principles upon which the system of household administration was based. Today, it is a word of much broader application. Whereever there is a frequently conducted activity requiring some control and a plan of supervision and direction, there may be an "economy." It is possible, therefore, to speak of educational economy, governmental economy, and even, by extension of meaning, of the physical, or bodily, economy of the human system. Still, the word is restricted most largely to the purposes with which we are chiefly concerned. The reasons for its appropriation by one science almost exclusively are to be found in the origin of the word and the history of its use. The economic establishment of the people of the time of ancient Greece has developed into the modern world-embracing producing and consuming organization, and though the affairs to be administered have increased in number and changed in character since that early day, the practices of modern business find their historical antecedents in the customs and usages and the rules and laws of the household. In its strictest meaning, the word "economy" expresses today essentially the same concept as in the beginning. It refers now, as then, to the principles of administration applied to the making and using of a living. In specific instances, economy may mean good management, as distinguished from management without implication as to its wisdom.

We are required to take note at once of a popular misunderstanding of an economic term which is also a word of common use. To many people, economy has somewhat the same meaning as

frugality. That is to say, the word "economy" carries to their minds a suggestion of saving and pinching. They think of one who economizes as one who is compelled to do with very little in the way of satisfactions. It is true that among the various principles of economy there may be some such rule as that, under appropriate circumstances and when necessary, one should deny himself; or we may say that economy requires frugality as a wise and necessary policy under certain conditions. But there are other possibilities consistent with good management. Economy requires only that the affairs in question in any case be wisely managed, that whatever is done be done to advantage, and that there be neither waste nor loss, even though there be abundance.

ECONOMICS DEFINED

The study of economics leads to the formulation of the principles upon which economy in the making and using of a living is based. The science of economics is concerned with the scientific laws which relate to the administration of business. We shall need a definition of economics which is more exact than these, however. We have spoken in a rather indefinite way of business and of the making of a living. These terms refer to the activity which is the subject matter of our study, but they give it no such precision of statement as our treatment presently will require. Our definition, therefore, must reveal the fact that the activity with which we are concerned is the satisfaction of human wants. The science of economics, we may say then, attempts to formulate the principles which relate to the satisfaction of wants.

THE SCOPE OF ECONOMICS

It must not be supposed that our study is limited in scope to the methods by which the desires for material things are met. The production and utilization of food, clothing, and shelter are obviously of the very greatest importance in the maintenance of life; but they by no means include all there is of economic activity. As the introductory paragraphs of this chapter have indicated, economics is concerned with many phases of life. It is concerned with the desire for recreation and amusement. It deals with the demand for intellectual pleasures and personal development. A

very great part of economic activity arises out of the need of man for social intercourse. We are to consider also, as we proceed, the methods by which people make provision for religious activities and satisfy the impulse to helpfulness. The incentives of affection, pride, and vanity, the craving for approval and the esteem of others, the lust for power, and every whim and caprice of man may bring into play the economic machinery and may be controlled and limited by economic necessity. In so far as satisfactions of any sort cannot be obtained without planning or effort, they require, and become the objects of, economic activity.

On the other hand, economics does not concern itself directly with the remote motives that influence and determine human conduct. It takes account only of such desires as are definite and manifest. The latter constitute economic wants. They are to be so regarded no matter what motives may have induced them or what hidden purposes may accompany them. Wants, in the economic sense, are desires capable of direct rather than indirect satisfaction.

The definition of wants, in itself, makes no distinction, furthermore, between those desires which are very urgent and those that are not. Wants are not necessarily needs. Wants are wants regardless of the fact also that some, from an economic or other point of view, are to be approved and others disapproved. Yet in reaching conclusions as to the consequences of the satisfaction of certain wants, the economist must disclose the fact that some wants are to be preferred to others. Every decision as to the satisfaction of a particular want may be submitted to a test of good policy. Therefore, human conduct is almost certain to be affected, and to some extent corrected, by the application of economic principles in practical affairs.

Economics accepts wants and the possibility of their satisfaction as facts; but, to repeat, it does not undertake to explain the causes that lie back of them. Why man's desires are infinitely variable, why some are insistent and others less so, why some are urgent now and quiescent later, why base and exalted motives mingle in seeming harmony, it is not possible for us, as economists, to say. We are compelled to adjust our study to such of these conditions as do exist. It is our business to observe human wants, not to explain them. All the incentives and compelling causes that lie within the mind itself are beyond the province of our in-

vestigation. Economics is not a study of the human being as such —that is the affair of other sciences.

We shall need to deal, in like manner, with the physical things, called goods, which are the objects of desire and which yield satisfactions. But the laws which govern physical nature also are to be developed by other sciences. We recognize that things differ in nature and substance, that they come into existence and pass out apparently in conformity with rule, that they differ in the properties which make them capable of satisfying wants and useful in the economic world, but we shall not attempt to say why these things are so. Such circumstances affect the activity which is the subject matter of our science; but they are not the subject matter itself. Economics is not a study of goods, but of relations and activities of people.

OBJECTIVES OF THE SCIENCE OF ECONOMICS

As a science, economics must develop, first, an understanding of the processes by which human desires are fulfilled. It must explain how people join in productive undertakings, procure the means necessary for productive success, divide the burden of management and labor, apportion the product which is the reward for their endeavor, and arrange for the consumption of goods and services. Economics must undertake, secondly, to show how the several causes that affect production and consumption lead to various results; and furthermore it must draw conclusions that will serve to guide those who conduct and in part control economic activity.

To accomplish these things, economics must take account of the machinery which has been created and the organization which has been established to undertake the satisfaction of wants. Thus, it must study the market and the organization of trade, the banks, and all economic agencies concerned with finance, manufacturing establishments, farms, labor organizations, corporations, and every other element of the economic system. The various economic institutions must be observed and correctly described, and the actual and the proper functions of each element of the economic system must be ascertained. Every activity must be so analyzed that its important and unimportant phases may be distinguished and that causes may not be confused with results.

THE LAWS OF ECONOMICS

The discovery of causes is the most important phase of the study of economics. We explain such occurrences and developments as challenge our attention in any field of study by finding their causes. We come to an understanding of economic life by searching out the causes that affect it and by observing the extent to which those causes operate with regularity.

The explanations at which we expect to arrive in this study are intended to reveal causes and, hence, to lead to the discovery of scientific laws. The word "law," as used in the scientific sense, signifies a prevailing, or in some cases even an invariable and inevitable, relation between one thing and another, the first of which we have been accustomed to call the cause, and the second, the effect. After we have found that one thing leads to another and that under the same conditions it is invariably so, we may formulate a general conclusion, or generalization, and this conclusion, if correct, will amount to a scientific law. If we were to find, for instance, that in innumerable cases high prices had led to the increase of the supply of goods in the market, or that laborers had refused to work unless they were paid wages, we could make a statement concerning the relation of prices to the supply of goods in general, or of wages to the supply of laborer's services, which statements might satisfactorily explain many occurrences in the markets for goods and services.

Economic laws are essentially only statements of the truth concerning economic activity. They indicate to what extent one occurrence or state of affairs depends upon another. But we can state the truth only as we believe it to be, and we deal with human activities which are subject to variation and change. We cannot reduce all our knowledge, therefore, to simple and final generalizations, and at best our scientific laws are statements of tendencies and probabilities rather than absolute certainties. Laws may be true and useful, of course, without being mathematically exact.

ECONOMIC THEORY

The explanations at which we arrive by the method given above we call theories. If our theories are true and conform to reality, they are in fact laws of economics. Unfortunately, the word

"theory" is in some disrepute because of the many false and unsatisfactory generalizations which have been set up as theories. These generalizations have been based upon inadequate evidence or incorrect reasoning, the former a thing we cannot always avoid. All scientists have been at times under the necessity of constructing theories in advance of the assembling of proof. These are, of course, only tentative or temporary theories. They are called "working hypotheses" and are to be used only until more perfect knowledge, gained by investigation, enables the scientist to correct his previous statement of the law as he supposed it to be. Such hypotheses are never finally to be accepted, unless they are proved to be in conformity with the facts. There is no such thing as a statement which is true in theory but false in fact, and there is no economic principle which is "all right in theory but does not work out in practice." Whether or not any attempted explanation of economic activity is a correct expression of the relation of cause to effect in the actual world of affairs is the point that determines whether or not that explanation is right in theory.

It should not be difficult to see how important it is that we discover the true laws of economics. We, as individuals, cannot get along for a day without our theories. In every act of our daily lives, if it is nothing more than choosing the way we shall take in going to work in the morning or selecting the food we shall eat at dinner, we proceed with some idea of a cause for acting the way we do and a result to come therefrom. Some people insist that they have no use for theories. By that they really mean, as some one has expressed it, that they have no use for other people's theories —they are generally full of theories of their own. They at least have the theory that theories are useless.

We are wise to the extent that we act on correct principles in the important affairs of life, and we are mistaken to the extent that we rely on supposition and unproved assumptions. In fact, there lies the explanation of most of our mistakes. If we depend upon guesswork in making a living, we may succeed—but only because of the occasionally favorable play of chance. If society as a whole were to proceed in the same way, it would establish institutions certain to fail. If the human race had built upon nothing more substantial than is offered by those people who see no sense in trying to discover scientific law, we should all be savages today, provided the race had not perished long ago.

THE STUDY OF ECONOMICS

It follows that it would not be the proper course for us to pursue, to select from the broad field of practical affairs simply the so-called "problems of general interest" for discussion in this introduction to the science of economics. Fundamental laws are not to be discovered by attending only to the things that happen to be attracting the attention of people not engaged primarily in searching for economic laws. Many matters, furthermore, that are of great personal importance to certain people or even to the great majority of the people are not especially significant from the scientific point of view. Neither will we accomplish the purpose of this study if we give ourselves over to the expression either of opinions and prejudices or of hopes and personal choices. We do not increase either our knowledge or our wisdom by giving vent to our feelings or repeating unthinkingly what we think we know. We cannot come to an understanding of economic life by debating among ourselves the fundamental questions of truth as to economic causes and results as though the answers to these questions were simply matters of personal choice and as though our attitudes toward scientific issues were to be determined by the personal gains we might expect from favorable solutions to economic problems. The fundamental truths of economics are not to be decided by popular vote.

It is our objective, rather, to assemble a body of scientific knowledge of economic activity and to establish conclusions to which the debatable problems of practical policy may be made to yield ultimately for solution. We shall need to admit the inadequacy of our knowledge at many a point, and at times we shall be able only to analyze scientific questions and leave them to be studied by those who may give more attention to the matter than we can afford in the time allotted to us. In so brief a survey of economic affairs as this which we are now to undertake, we shall be able to deal, furthermore, only with the more obvious facts of the field and the most fundamental principles. We shall have little opportunity to bring to the support of these principles the great body of evidence developed in experience and assembled by students. Yet we may hope to come to an understanding of the nature of economic activity and to a knowledge of the principal causes that govern the satisfaction of wants.

THE PRACTICES OF BUSINESS AND THE SCIENCE OF ECONOMICS

The statement of the principles of economics will not require of us a description in full of the numerous minor operations which so largely constitute the practice of business, or the business arts. Business men are engaged in part in the detailed work of ordering goods, giving instructions to workmen, keeping records, preparing advertising copy, and numerous other routine activities of no very great moment in themselves. Nevertheless, we may not ignore these matters altogether; for while it is not so very difficult to distinguish the least important business operations from the great economic processes which are our chief concern, the two are both parts of the complex of economic activity. The minor operations of business are carried on for the same purpose as are the major economic processes. Both are necessary to the creation of goods and the satisfaction of wants. The former are in fact a part of the latter, and the greater are composed of the lesser. There can be no clear line drawn, therefore, between "business practices" and "economic processes."

It will not be necessary, likewise, for us to enter into the study of the various precepts or rules by which the routine administration of business is conducted and which have so important a place in practical management. At the same time, these precepts and the economic laws to which we have referred above are both parts of the same body of economic doctrine. The principles of business are based upon, and are an expression of, economic law in so far as they are sound and true. The statement of economic law, similarly, serves the important purpose of promoting economy in administration.

It may be necessary, therefore, for the economist to take cognizance of the practices of business administration, though many of them are of comparatively little importance in the study of economic causation; and the business manager, for his part, must base his decisions upon a knowledge of the principles of economics if he is to manage well.

BUSINESS DEFINED

The preceding discussion presents the difference between a science or a group of sciences and a related art, or system of

practice. Economics is largely the science of business; business is the sum of the economic arts, with the possible exclusion of the actual consumption of goods and services. A similar relation exists between physics and mathematics, on the one hand, and the practical art of engineering, on the other. The two sciences are concerned with somewhat the same phenomena as the art. The former are studied for the purpose of interpreting and explaining; the latter, with a view to operating and controlling. The difference is one of purpose and point of view.

But even in these points the science of economics and the art of business are so interwoven in actuality that we are not able to regard the two as entirely separate and distinct. The attitudes of both scientist and artist are found to be complementary in the business manager himself. He is of necessity a student, acquiring knowledge and bringing experience to his aid. Only by so doing does he develop wisdom in practical administration. He has on the one hand, the task of coming to conclusions as to the causes of business success and, on the other, the task of the application of knowledge in specific instances. The economist, also, in his search for causes, seeks the solution of the problem of the better satisfaction of wants and interests himself, thus, in practical administration.

The economist must depend upon the various other sciences for a full knowledge of all that of which he is compelled to take account. In the same way, the business manager must draw upon other arts for the actual conduct of his enterprise. The latter often makes use of physical things and must depend upon those skilled in such practical, or technical, arts as are applied in the various manufacturing industries. The manager deals also with human beings and draws upon many sources of assistance for the physical and intellectual improvement of this, the most important, element of his productive organization.

There are other and narrower uses of the word "business." It is defined by some as profit-seeking, a definition that seems to exclude all human activity that is not rewarded directly by profits. Under this interpretation of the word, the great numbers of investors who receive income in the form of interest, the agents who are paid by commission, and the experts of the business world who, as employees or managers, are rewarded by salaries are not to be considered as business men. Such a definition may have its

proper use, but it conveys an idea so indefinite as not to serve our purposes at all. Business ordinarily suggests to others only those activities conducted in the so-called business districts of our cities. On second thought, such people add the manufacturing enterprises and possibly mining to the category of business, but they stop short of farming and housekeeping. Seemingly, every popular conception of this term is either indefinite or somewhat illogical.

In the view of the matter that we are compelled to adopt for our purposes, the word "business" refers to that group of the activities of all the people which we have indicated to be a large part of the subject matter of this study, namely, the activities involved in the producing of goods and services for the satisfaction of wants. Business includes every one's occupation. We shall find other terms to indicate the subdivisions of the field, some of which will correspond, possibly, with the definitions of business which are currently accepted. The want-satisfying activities of the people are so interrelated, however, that economics becomes inevitably a study of every man's business.

ECONOMICS A SOCIAL SCIENCE

Economics is a social science. It is the nature of the social sciences that they treat of the relations of person to person and of group to group. In other words, they are studies of society rather than of the individual separately considered. The satisfaction of wants involves and induces intercourse between people and leads to the temporary and relatively permanent association of individuals. The relations of employer and employee, dealer and customer, and borrower and lender are social. Cooperation and competition, likewise, are social by their very natures. It is conceivable that an individual might satisfy his wants by his own unaided efforts, but as a matter of fact it is seldom possible. Today, the satisfaction of one person's wants requires economic contributions from many producers throughout the world, and his own productive efforts may be of practical consequence to thousands. The intricate fabric of man's economic relations is both socially created and in part the basis of society.

We may gain a better understanding of the nature of economics if we dwell for a moment longer upon the definition of society which is accepted in the paragraph above. Of course, no one

would assume that we meant by society in this connection those people who habitually flock together for diversion and who are known by such names as "fashionable society." But we are often inclined to think of society as the body of people organized in some way or at least acting together for some purpose. The result is that the word "society" comes to mean to us simply the state or the public, and social affairs come to be identified in thought with public affairs. In the view of the matter that we have taken, society is people conscious of, and influenced by the fact of, each other's existence. Society is people in association of any sort, whether it be only a matter of thought or a matter of many activities, and whether there be few or many people, a part of the population or all of it. The social sciences are concerned, therefore, with all the relations of person to person and of group to group. Economics undertakes to discover the laws governing certain of these relations.

PUBLIC AND PRIVATE ASPECTS OF ECONOMIC ACTIVITY

Though it is of little consequence in determining the social character of the science of economics that it deals with important public problems, it was, for the most part, just such problems that gave rise to the science. The development of economic thought was greatly influenced in the beginning by the events of the early modern period of European history. The efforts of the statesmen of that period were directed very positively toward the promotion of national enrichment, for the rivalry of nations seemed to make it important to discover methods by which wealth might be accumulated within the borders of the home land, and it was thought that foreign nations might drain away the national wealth. The first of the modern economists gave much attention, therefore, to the questions of the foundations of national prosperity and of the relation of the state to private enterprise. Through much of the modern period, in fact, the public, or political, aspects of economic affairs have been given a similar emphasis in the treatises of the economists.

Because of the character of its early impulse, the science of economics was given the name of political economy, a name which suggests management from the point of view, and in the interest, of the state. Some economists believe the purpose of the study

of economics to be to promote directly the social welfare. They are sometimes called the "welfare economists." If they are right in so believing, and if society means simply the state or the public, the name political economy would be a very appropriate name for the science. On the other hand, there are economists, sometimes called the "price economists," who are often accused of overemphasizing the private interest in economic activity and of giving us a science devoted simply to helping people enrich themselves personally. Within both groups are some who call the science economics and some who call it political economy.

It makes little difference which name is used, but it makes a great deal of difference what we think the scope and purpose of the science of economics to be. If we are to deal only with certain aspects of the satisfaction of wants, either because we think public problems to be our sole concern or because we consider ourselves to be students of business in the narrowest sense, we shall neglect some important phase of economic life. Some one will need then to create a science to deal with that which we have excluded from our study. In fact, there are those that assume that we need two sciences in this field—one to be called economics or political enonomy and the other to be called the science of business or the economics of business.

The truth is that there are not two separate groups of want-satisfying activities. Rather, all the activities with which any sort of an economist would have occasion to deal are conducted and controlled in part by the individual and in part by the people who constitute society. The effects of those activities are of consequence both to the one and to the many. He who studies business to discover the scientific laws that determine personal gain studies the same causes and the same currents as does the student of social welfare. Those who attempt to sort out of the complex of economic activity the elements which are of social consequence and of private interest, respectively, find that seemingly every minor business operation may in some way and at some time command public attention and call even for public regulation and that every law and every public policy is a factor in private affairs. All the problems of economic activity are the personal problems of some one, for a matter that concerns no individual can hardly concern all society; and the public problems are simply those personal problems which concern a great many people.

There are public and private aspects of economic activity, but there is only one set of economic laws. The modern science of economics is concerned with every relation of person to person and every joint activity which it may be necessary to study in order to explain the satisfaction of wants in all its aspects. There is, consequently, only one science of economics. That science, furthermore, serves primarily and directly only one purpose. The secondary and indirect objective of economics is the promotion of economy; but the immediate task and essential justification of the economist, as a scientist, is the discovery of useful truth. The economist as such, therefore, is primarily neither a reformer nor a creator of profits; though secondarily he may be, and almost necessarily is, interested both in social improvement and in the accumulation of wealth.

The study of economics may help some of those who read its principles to see the way to a better social order and others to gain greater personal success. Both objectives are worthy. But these pages are written to serve directly only the primary scientific purpose of helping those who desire to do so to come to a better understanding of the processes involved in the satisfaction of wants and of explaining in some measure how we live and work together.

II

ECONOMIC ELEMENTS

The conditioning factors of economic activity. The economic personnel. Goods and services. Utility. Free and economic goods. Cost. Expenses. Income. Capital. Business and personal services. Assets. Wealth. Property.

WHILE so far we have undertaken simply to define the nature of our study and lay down the boundaries of our field of endeavor, in so doing we have introduced incidentally the three fundamentally conditioning factors upon which economic activity depends. The three factors are society, man, and external nature.

THE CONDITIONING FACTORS OF ECONOMIC ACTIVITY

Without organized society as it now exists, there would be no such economic structure as that which we are about to survey; for in a very great measure the entire social life of the people determines the nature and course of the particular affairs with which the science of economics is principally concerned. The satisfaction of wants is one among many related activities; and the economic system is a part of a larger social system, which embraces governmental, educational, religious, and numerous other institutions. It is impossible for us to study economic activity, therefore, except by examining social situations which are composed of non-economic, as well as economic, elements, and from time to time we shall find ourselves touching necessarily upon many aspects of fully developed social life. We shall have occasion to take into account law, government, ethical codes, and numerous customs of the people.

Economic activity depends, secondly, upon man. He is both producer and consumer. That which he decides upon and accomplishes in the field of production affects and in great measure controls his activity as a consumer. He can have for use only such food, clothing, and other goods as he undertakes to create and succeeds in creating. His needs and desires, on the other

hand, are the incentive to all that is undertaken in production, and his choices as a consumer govern productive activity in a very real sense. Thus it is only because goods of a certain sort are demanded, generally speaking, that producers undertake to provide them, and whether producers shall hunt or fish, raise wheat or tobacco, weave silks or woolens, lies very largely within the choice of the consumer. Man's wants as a consumer and his powers as a producer thus direct and limit economic achievement.

As a producer, man appears both as manager and laborer. In the one capacity, he has the function of direction and control. In the other, he brings to bear upon the productive process such of his physical and mental power as the technical operations of production may require. He contributes, therefore, both knowledge and judgment as a manager, and skill and physical force as a laborer. The economic system is dependent upon such contributions for the creation of goods and services.

The satisfaction of wants is dependent, in the third place, upon nature, by which term we mean, in this connection, that part of the physical world external to man himself. Man is compelled to draw upon the resources of nature for many materials which are both the direct and the indirect means of satisfying wants. He takes such minerals as coal and iron from the earth, makes use of animals found in the sea and upon the land, and depends on the soil and natural forces for the production of crops. He relies upon such physical forces as electricity in the creation of power. The bounty or niggardliness of nature and the character of that which it yields to man affect his mode of life and his success in economic enterprises. Nature determines to some extent what sort of clothing man shall wear, of what material he shall construct his buildings, what means of transportation he shall use, and what parts of the earth he may occupy.

THE ECONOMIC PERSONNEL

Man, as the preceding topic has disclosed, is more than a conditioning factor and an external influence upon economic activity. He is an integral part of the economic structure and appears in every rôle in the administration and conduct of affairs. He conducts the operations both of production and consumption and constitutes the essential element in the economic organization. When

regarded thus as an internal factor, man, collectively, is spoken of as the economic personnel. The people as organized for productive activity constitute the productive personnel.

Each person, in the strict sense of the word, is presumed to have a definite place in the economic organization and is expected to assume responsibility for a certain and limited part of that which is undertaken by the people as a whole. We do not mean to say, however, that each individual as such is limited in the scope of his activity to a single task. As a matter of fact, practically every individual appears in economic affairs in more than one capacity. A partner in one enterprise may be an investor in another and may engage both in buying and in selling either on his own account alone or as agent for others. But while one may hold many positions and engage in many activities, he is to be regarded when acting in each of his several capacities as a separate economic person. Thus, when one is spoken of as a consumer, his activity as a consumer is the only matter in contemplation. As a consumer, he is one person; as a producer, another.

When we separate the people into various classes to disclose their several positions as members of the economic organization, we are by no means dividing them into fixed groups. Rather, we are describing every individual repeatedly, each time from a different point of view. The producers and the consumers are the same individuals, but differently engaged from time to time. The managers and the laborers, as we are to come to know them, are to some extent the same individuals performing, possibly, two separate phases of a single task or each acting now as the one person and then as the other. One may be both manager and laborer in his own establishment, as in the case of the small retail storekeeper, or he may be manager from the point of view of his own affairs and laborer in a larger or separate undertaking.

Because of specialization and the concentration of attention, each individual may emphasize one activity more than another and may occupy one position more continuously than any other. He regards one of his activities or a group of activities as his occupation. It is possible, consequently, to classify people according to their occupations. Yet, in general, we must think of the elements of the economic personnel as consisting of individuals in many separate capacities and of the economic person as something less than an individual in all his various activities.

GOODS AND SERVICES

Man and external nature have been presented as basic elements which, along with society, must exist before economic life can appear. They are forces directing and limiting economic activity. We have given man a second designation, namely, "economic person," because of the place he holds in the economic organization itself. In addition, each of the two elements may make a direct contribution to the satisfaction of wants. Out of this fact arises the need for the two words, "goods" and "services."

Those physical things which we have called nature when viewing them collectively as forces that contribute to economic life are to be called goods when they are given a specific relation to, and are put to use in, the satisfaction of wants. Such things as iron, lumber, wheat, and electricity are the elements of which nature is composed, but when we think of putting them to use, we call them goods. No additional name has been adopted to apply to man himself when he is considered as a source of satisfaction, but his contribution to economic activity is called service. His efforts in preparing physical things for use and in giving such direct satisfactions as come from legal and medical advice and from instruction, entertainment, and amusement are of the nature of services.

By way of definition, we may say, then, that physical things, including all the elements of nature which are capable of being put to some economic use, which directly satisfy wants or may be utilized in the process of preparing other things for that purpose, are goods. Every act of a person (other than the act of consuming) which is of such a nature as to contribute directly or indirectly to the satisfaction of a want is a service.

Some are of the opinion that there is no point in drawing a distinction between goods and services, for, since goods are prepared for use generally by man, they are essentially an embodiment of the service which entered into their preparation. In other words, when we buy food and clothing we are simply paying for the labor of the producers who prepared the land, buildings, and machinery for the creation of goods and who finally produced the goods. In the last analysis, therefore, goods and services are identical in character. There is a sense in which the conclusion

stated is true. A second notion is that goods themselves only render a service and if our analysis were correct, we would find in the end, not goods and services, but man and nature both yielding services only. Thus, the automobile is said to make a contribution to the satisfaction of wants similar to that of a person. The musician and his violin are both producers of a service. It is the service rendered by the violin, in fact, rather than the materials of which the violin is composed, that is the object of our desire. Clothing and food may be regarded, likewise, as yielding service.

There is much truth in all this, and these refinements of analysis are useful in some connections. The points established, however, are too unsubstantial to serve us as a basis of definition. The two things, goods and services, do have separate existence and at the time they exist are decidedly unlike in character. There is, in fact, a very real and practical difference between the use of goods by the producer or the consumer, on the one hand, and the application of man's talents to the process of production or directly to the satisfaction of wants, on the other. The difference is important enough, furthermore to justify the distinction drawn in the definitions given above.

UTILITY

Goods are possessed of utility. Utility is the power to contribute to the satisfaction of wants. The quality of goods to which our attention is thus directed is not to be identified with the power to confer moral benefits nor with the power to serve purposes of which the community may approve. We may think that opium serves no beneficial purpose, and that poisonous gases have no proper place in warfare, but our judgments upon these matters do not touch the question of the utility of opium and poisonous gases. It suffices if goods are capable of yielding some satisfaction or may be made to serve some purpose in production, however unwise the consumer may be in seeking the particular satisfactions which are to result from the use of the goods or how clearly uneconomical the actual use of the goods may be. Of the many characteristics of goods, considered from the several possible points of view, utility is the only one of economic importance. We prize goods for, and measure them in terms of, their utility.

FREE AND ECONOMIC GOODS

Goods which may be had for the wishing and which are supplied to us without effort on our part are free goods. Where goods are free, no economy is necessary. Goods which are not free and which require management or sacrifice to obtain them are called economic goods. Air, in most cases, is a free good; but so few are the useful things which may be had in abundance and without effort that we exclude free goods for the most part from our discussion.

The causes which give various physical things an economic character are: (1) the difficulty of access to them, (2) their imperfect adaptation to use, and (3) their scarcity. Even the primitive people of the world, for the satisfaction of whose limited wants nature seems to have provided adequately, find what would otherwise be free goods in the most inaccessible places. The fruit upon which certain people of the tropical regions live is seldom found exactly at hand. The food of the hunting Indians of America was searched out in the forest or pursued upon the wide plains. The minerals which civilized people use for fuel are covered with rock and soil. Fish are found in the deep, from which they are to be taken only with some effort. Numerous articles of commerce must be brought from the jungles and frozen wastes before they may be put to use. Materials such as these might all be free goods except for the fact of their inconvenient location and the difficulty we find in making them available for the satisfaction of wants.

People may be surrounded, to consider the second cause mentioned, with limitless forests, and they may find under their feet abundant building material. But only by their own efforts may these things be made into buildings. Metals, though lying on the surface of the earth, can be converted into machinery only by the activity of man. Fibers which grow within easy reach are to be adapted by man to their particular use if they are to become clothing. Such things may all be found in abundance and in convenient locations, but, by reason of their imperfect adaptation to use, they are, nevertheless, economic goods.

In the third place, some physical things are naturally scarce and too greatly limited in quantity to meet the needs of all those who desire to use them. This may be said of most of the things now produced upon the farms. It is only by attention to the cultiva-

tion of such materials that quantities may be increased, and it is only by the exercise of foresight and care that supplies may be preserved for later use. Because the community of consumers does not content itself with the quantity of goods placed by nature at its disposal, economic activity enters into the creation of greater supplies, which thus become economic goods.

What has been said in general of goods may be said, likewise, of services. While under certain circumstances they may be free, their creation and application to the satisfaction of wants commonly result from the expenditure of thought and effort, and it is by reason of this fact that they are provided in limited supply and are economic in character.

COST

The process of creating goods involves cost. Cost is the effort or expenditure, the sacrifice or loss, necessary to create or procure goods. The word "cost" invariably conveys the idea of something given up or something endured for the sake of a gain in goods and ultimate satisfaction. As the definitions presented in the topic above have indicated, there are no economic goods or services without cost.

Chief among the various costs is labor, so important is the part played in economic affairs by human effort. Labor includes mental as well as physical activity. It differs from play in that labor is not desired for its own sake, while play is undertaken for the sake of the activity itself. Play yields its own reward; labor is performed for the sake of goods to be enjoyed as a result of the labor. Labor is the preparation of the means of satisfaction; play is a realization of satisfaction. Labor is activity that is not desired but is found necessary. It is ordinarily distasteful and involves sacrifice. For this reason, it constitutes a cost.

In certain circumstances, one may combine work and pleasure. Absolute inactivity is so irksome to normal people that they enjoy their tasks in the early part of the day, after a vacation, and even continually if intervals of relief and diversion are frequent. In such instances, the labor cost is low or entirely disappears for a time. It often happens, on the other hand, that games which were devised entirely for play are promoted for gain and afford regular occupation to the participants. Professional baseball and football

are illustrations. The privilege of attendance upon the games is sold to consumers, and the performance of the players comes to be regarded as an economic service. That which was intended as play, in this way becomes labor to those who engage in it.

When waiting attends the effort to satisfy wants, there arises an additional cost. Delay between the appearance of a want and its final satisfaction is ordinarily unwillingly permitted in the absence of compensation for the delay. Whether the want in a particular instance grows more or less intense with the lapse of time, the postponement of satisfaction is almost invariably something of a sacrifice. When waiting takes place, therefore, it is generally by reason only of necessity or for the sake of some gain to result from the waiting.

The outcome of every productive undertaking is uncertain, and producers must contend with risk in all their attempts to satisfy wants. Farmers are handicapped by the possibility of storms and unseasonable weather, and in many undertakings uncontrollable natural forces may be the cause of failure. Fires, injuries to workmen, inability to procure raw materials, and innumerable other causes create situations which make it inevitable at times that efforts at production will fall short of expectations. Producers are compelled to take account of this possibility and to submit to risk as an unavoidable detriment for the sake of the return which is to be the result of labor and waiting in the many instances in which productive efforts are followed by success.

We have seen that an activity which ordinarily is to be regarded as labor, in other circumstances may be play. There are occasionally, likewise, elements of seeming gain in risk, which for the most part is only cost. There are those who profess to take satisfaction in risk itself and who place bets and enter games of chance "just for the fun of it." Generally, however, the losses which come with the assumption of risk are sufficient to offset all the thrills which, supposedly, are involved in uncertainty. Those who claim to find satisfaction in risk will generally discover, on analysis, that their satisfaction is derived from the favorable outcome of the taking of chances rather than from the possibility of loss itself. And it is to be remembered that risk is essentially the possibility of loss. The gains of production (to return to affairs which are strictly economic) are to be found in the attainment of its objectives, not in that ever impending failure which risk implies.

The creation of goods invariably requires the utilization, and sometimes the destruction and loss, of materials. Some of these materials become the physical basis of the goods which are thus created. The wood used in making furniture actually becomes furniture. Machines are composed of metals and other goods which are used in their production. There are other materials that become no part of the finished product and are sacrificed entirely in the process of production. Thus, the seed which enters into the making of a crop of grain is completely destroyed in the process. Many manufacturing operations, likewise, require the use of fuel which is destroyed in the course of manufacture. A third loss of materials arises from the fact that the use of buildings and machinery results generally in their depreciation and ultimate disintegration. These are all obviously items of cost.

EXPENSES

If one were to satisfy his wants through his own labor alone, bearing himself all the waiting and risk and providing all the materials used, costs would appear always in the fundamental form described above. It happens, however, that the contributions of several successive producers enter into the production of most goods. Each individual, other than the first, in such cases compensates those from whom he receives the goods for the costs they have borne and adds some cost of his own before the goods are transmitted to their final destination. Most of the elemental costs, consequently, are soon translated into cash costs, or expenses. A farmer who produces apples for his own use may think only of labor, waiting, risk, and loss of materials as the cost of the apples, though, generally, even he has made some expenditure of money. But the ultimate purchaser of apples considers the money he is compelled to pay in making the purchase to be the cost, and speaks of the payment he makes as the cost of the apples or as one of his living expenses.

It is possible to trace all expenses back in some measure to one or all of the fundamental elements of cost. Every cash payment by a consumer is a reward to the various producers for such of the costs as each of them has assumed, though each may have received his share of the reward at a different step in the process of preparing the goods for the consumer's use.

Costs and expenses are both to be distinguished from prices. The sum at which a seller is willing to dispose of goods or services does not always correspond to his costs. He may sell at a loss or at a considerable gain over his own expenses and other contributions to production. If a buyer pays the price demanded by the seller, the payment constitutes a cost to the buyer, but it by no means follows that it constitutes the entire cost to him of that which he acquires. The purchase price is clearly not the entire cost if one purchases unfinished goods and adds labor before receiving the desired satisfaction, as would be the case if he purchased cloth to be made into garments. Likewise, if one buys groceries at a cash-and-carry store and must himself provide the service of delivery, either by his own labor or at an expense in hiring some one else, the cash payment for the goods is less than the full cost of the satisfaction acquired. In all these situations, real costs may be obscured by prices, for while prices paid are expenses from the point of view of a purchaser, they are not invariably identical with fundamental costs or with total expenses from the standpoint either of the buyer or the seller.

INCOME

Income and its correlatives, outgo and expenditure, are words applied to goods when considered, not as a stock on hand, but as moving from one person to another. One speaks in various ways of the goods he has now or had at some other given time, but when speaking of the satisfactions received during a certain period of time, he refers to them only as income. A tabulation of one's possessions refers necessarily to a certain instant only. A record of income, on the other hand, describes the flow of goods and services during the lapse of a week, a month, or a year.

It is customary to state income in terms of its equivalent in money. There are many people, nevertheless, who receive a large part of their incomes in goods and services directly, and all people ultimately exchange money received as income for commodities and services to be consumed. The things thus acquired for actual use constitute real income in the economic sense. Neither the money nor the commodities are of any consequence, however, except as they yield satisfactions, which are the ultimate income. We take account of income, thus, in three rather distinct aspects.

One may receive his income in the form of money and convert it into real income, as has been suggested, or he may simply measure the goods and services he acquires by comparing them with money. One's income, thus, may be said to be $5,000, no matter in what form it is actually received. This practice has a special advantage in that it enables us to combine goods and services of many kinds in a single income statement. The practice leads, however, to some uncertainty as to the exact amount of real income indicated by any statement, because of the fact that the purchasing power of money changes from time to time. For instance, a salary of $5,000, representing the income of a certain person for the period of a year, would indicate a much lower real income in the year 1920 than in the year 1900. Definiteness in the expression of incomes is obviously a very important consideration in practical affairs, particularly when long-time contracts concerning salaries and wages are to be made. It is equally essential to clarity of thought in the study of economics that we carefully distinguish real income from the cash income to which reference is so generally made.

CAPITAL

When expressing the relation of goods to the general use for which they are intended, we may give them the name of capital. Goods may be devoted, thus, to the direct satisfaction of wants, or they may be used in the production of other goods. When indicating the former use, we speak of consumer's goods or of consumer's capital. Goods to be used in production may be designated as producer's goods or producer's capital. These statements disclose the underlying meaning of the word "capital," and it is very important to see that capital refers to exactly the same physical things as does the word "goods." Both words suggest the adaptation of the things to which they refer to the purposes of man; but the word "goods," being the more general of the two, indicates only the fact of adaptation to use, or the existence of utility, while the word "capital" refers specifically to the fact that the use for which the goods are to be employed has been determined upon.

In business practice we designate consumer's capital simply by the term "goods," presumably because it is to be taken for granted that goods are intended for the use of the consumer. When any

confusion would arise from conformity to this usage, we may speak of consumer's capital as consumer's goods. The word "capital" is generally reserved, therefore, for application to producer's goods. Producer's goods may be divided into two classes, the first of which is land and the second of which consists of goods of all other sorts. Land is one of the great aids to production, but for reasons, of which some are obvious and others are to be mentioned later, it is separately classified; and the word "capital," therefore, is restricted finally to other goods used in production. Capital may be defined, consequently, as goods, other than land, used in aid of production.

In a certain few cases, consumer's goods may be regarded by their owners as capital even though no real service to production is effected by them. An illustration is to be found in residential buildings. A house owned by one man and occupied by another is being utilized by the tenant as a consumer's good; but since it yields an income to the owner, he may regard it as capital. When so considered, goods may be called acquisitive capital, because they are a means through which the owner acquires an income.

As in the case of income, it is customary to refer to capital in terms of its value in money. It is seldom the case, however, that a business man's capital consists largely of cash. Buildings and equipment, machinery, live stock, raw materials, and finished consumer's goods held in stock are the principal elements of capital. It is simply for convenience in combining these various classes of capital into one group that they are identified with their monetary value.

The capitalization of a business concern does not always correspond to its business capital. By capitalization we mean the amount of the authorized capital or the amount of capital which a concern plans to possess. It is convenient to express capitalization also in terms of money. A corporation, for instance, may be said to have a capitalization of $100,000. The figure stated indicates the amount of capital which the corporation is authorized to acquire and the amount with which, in all probability, it will begin operations or which it will assemble in the early period of its existence. In the course of time, however, the corporation may have lost a part of the capital it once possessed or may have gained, by borrowing or by saving its income, a great deal more, with the re-

sult that its capitalization and its actual capital will have drawn apart.

BUSINESS AND PERSONAL SERVICES

Services, like goods, are to be classified according to the use to which they are devoted. Some services are the end, and their creation the objective, of an entire productive undertaking. A physician is a producer who creates only services. His services yield direct satisfaction to the consumer and are comparable to consumer's goods. Such services we will call consumer's, or personal, services. Other services are the means by which goods are made available to the consumer. They are used, in other words, in furtherance of production. The services of a laborer in a factory are of this nature. Such productive services may hereafter be called, for our purposes, productive, or business, services. They play a part in productive activity which is greatly similar to that played by capital.

ASSETS

Assets are the productive resources of an individual or an enterprise. They include not only the capital, but all those resources of capital and advantages in production which are of such certainty of productive power as to be capable of approximate measurement. In listing the assets of a business undertaking, the manager commonly enters the entire physical equipment of all sorts, such debts in the concern's favor as are definite and certain to be realized upon, and even such intangible resources as patents and good will. It is only as an asset that an individual may take account of his own physical and intellectual ability, for personal qualities are not properly to be designated as capital and constitute neither goods nor services. It is as assets that the state or nation may take account of its favored location, its excellent climate, the superior qualities of its people, and other such non-material attributes of the land and its inhabitants. Even obviously productive resources are not practicably to be listed as assets in the actual conduct of business, however, unless they are capable of some sort of satisfactory measurement, which will serve to determine their relative value.

WEALTH

Goods and services may be viewed from still another standpoint. When they are considered as aggregates for the exclusive benefit of a particular individual, a community, or a nation, they are spoken of as wealth. In the use of the term "wealth," individual items are disregarded, and the differences between goods of various sorts are ignored. The sum of the goods and, we may add, services, to the use or enjoyment of which any person or group is entitled is the wealth of that person or group.

It is to be noted that we have not excluded from the category of wealth those non-material benefits which are brought to the consumer in the form of personal services. In other words, we are granting that medical attention, legal advice, instruction, and amusement may be the practical forms in which wealth may be enjoyed. Yet there are reasons why we might hold that there is no such thing as non-material wealth. We may prefer to think of wealth as something which has physical existence and which can be set apart, be owned and possessed, and be displayed as a concrete evidence of one's economic position. Services have only a momentary existence. They are intangible and may not be accumulated. They do not exist in aggregates of an enduring nature. If we were to regard wealth as a stock of things on hand, therefore, we should find it impossible to include services.

But wealth, both by scientific and popular definition, is something other than simply an existing stock of goods. It is, rather, the sum of all the goods and services of which one is immediately in possession, and those also, existing or yet to be created, which he may rightfully demand of others. Wealth is held by the individual nowadays not only in the form of goods, but in the form also of claims against persons—which claims may be satisfied by the delivery of goods, the payment of money, or the rendering of service. It is quite often the case that wealthy individuals have no extensive physical possessions at all but hold their wealth largely in the form of such claims to income as stocks and bonds, the receipts from which may be converted at will into goods and services. Wealth, therefore, is essentially the power to command income, and is expressed, as our initial statement indicated, in terms of aggregates of goods and services and, generally, in terms of the monetary value of those aggregates.

PROPERTY

Property is (1) the legal right to the use of, and to the benefits from, specific goods, and (2) the legal right to income. The community may reserve to itself the control of the goods or some considerable part of the goods which its members are to use. Property, in such case, is known as common property. Generally, individuals have exclusive rights to the use of particular goods and may retain or dispose of the benefits at will. The result is private property. The acquisition and use of private property is always subject to some practical and legal limitations imposed by others than the owner, and the right of private property is conferred, or acquiesced in, by the state or nation as a whole. In modern nations, rights of all sorts are defined by law, in its broadest sense, and are enforced by the power of the state under the direction of the courts. Individuals occasionally enjoy the use of goods in which they have no property by concessions on the part of the owner or through fraudulent or forcible acquisition, but no one is protected in the use of goods unless his right is recognized by the state.

The right to use is not to be confused with goods themselves. Strictly speaking, an automobile is not property; but one may have property in an automobile. This statement is not in accordance with popular understanding of the matter, for the word "property" in common practice indicates, generally, the good possessed rather than the right of possession. By figure of speech it is permissible to identify the right with the physical object; but to do so often results in confusion of ideas. The further discussion of property is intended to show the necessity for clearness in the use of this word.

A farm is an economic good, is a part of the farmer's assets, and is included in his wealth. As evidence of his property in the farm he holds a "deed." The farmer may have borrowed from a neighbor in order to acquire the farm and have given the neighbor a mortgage on the land to insure the payment of the resulting debt. The farmer is then under obligation to make periodic payments, and the neighbor may claim, in consequence, a part of the product of the farm or an equivalent payment in money. In addition, the farm may have been leased to a tenant who has acquired by the lease a right to the use of the farm and to the retention of a part of

the benefits accruing from its use. Under these circumstances, while there is only one farm, there are three people having legal claims to parts of the benefits to be derived from the farm, and there are, therefore, three property rights bearing a relation to the land. Similarly, a corporation may possess capital consisting of goods of numerous kinds. Property in these goods is held by the corporation. But there are several shareholders, each claiming an interest in the earnings of the corporation. In addition, the corporation may have creditors whose claims constitute rights to a part of the benefits from the use of the firm's capital and from its productive activity.

The failure to observe the distinction between property rights and physical goods has occasioned confusion and injustice in the administration of public affairs. Taxes have been levied in some cases on goods alone, and in others on both goods and the property rights in the goods. A farm valued at $50,000 is taxed, let us say, on its full value. If a $20,000 mortgage note has been given in part payment for the farm, the farm and the mortgage may both be taxed, at a combined value of $70,000, though the actual total is only $50,000. The illustration suggests, also, the difficulty with which we are confronted in estimating the country's wealth. One person lists all his various property rights and the goods actually in his possession. Another lists the goods to which some of the first person's property claims, such as mortgages, are attached; and a third, the claim he holds against the goods of number one. A corporation may list all its physical capital, and the stockholders and bondholders, the amount of the funds that they have contributed to the purchase of the capital. If the totals of all individuals compiled in this way were added together, the result would be an aggregate of wealth much greater than actually exists. The difficulty may be overcome if totals are made in disregard of all property claims and on the basis of goods alone, or if some of the overlapping property rights are canceled in arriving at the final result.

The character of the most important types of property rights, including those which have been suggested in the illustrations given above, may be brought out in a classification of property from an economic point of view. In the first class are to be placed all those rights which relate to the use or possession of specific goods. Among the property holders of this group is one commonly

known as owner. He differs from the other claimants in that he holds the predominant claim. His interest in the goods to which his right is attached is not necessarily the greatest in every sense, and in some cases it does not outlast the others. Other properties of this class are those of the leaseholder, or tenant, and the mortgage holder. The mortgagee is one who stands in the position of a creditor to the mortgagor and has taken a claim to the latter's goods as a security for the payment of a debt. In the second class belong all rights to income which hold against persons rather than against goods. The rights of the ordinary creditor constitute a case in point. In the third class belong those property rights which lie against no specific goods or persons but which involve simply certain exclusive opportunities to acquire income. Some of these rights are given by direct grant from the government, as in the case of franchises allowed to street railway companies and other public utilities. In the same class are to be found patents and copyrights. Rights of the third class are protected, as are those of the first, by action against those who infringe upon or violate the rights. Some of the so-called assets of business concerns are not property at all, since they constitute no claim against goods or any particular person and have been given no recognition by the state which would entitle the owner to protection at law.

The existence of a property right is to be discovered either from documentary or non-documentary evidence. Those who are in actual possession of goods ordinarily have no written instrument to show their claims. There are also, in many instances, claims against individuals which are founded only on oral understandings. The evidence of property in such cases is non-documentary. The documentary evidence of property comprises numerous instruments the nature of which varies greatly with business practice. Of those of current use there are two principal classes, one of which may be denominated as evidences of title, and the other, as evidences of debt. Evidences of title include deeds to land, bills of sale, mortgages of real and personal property, leases, bills of lading, which are evidence of ownership of goods in the hands of a railway, and warehouse receipts, which show the title to goods held in storage. The evidences of debt more commonly used are promissory notes, bills of exchange, and corporate bonds. Practically all documents of both kinds are drawn in the form of contracts. We shall give these further attention later.

ECONOMICS

PRINCIPLES AND INTERPRETATION

PART I

PRODUCTION

III

THE NATURE AND ORGANIZATION OF PRODUCTION

Production defined. The productive processes. The essential nature of production. Non-productive activity. Uneconomical production. The factors of production. The creation of capital. Investment. The organization of production. The division of labor. Classification of productive organizations.

THE raw materials ultimately to be applied to the satisfaction of wants are in some instances immediately available for the service of man and, therefore, are free goods. For the most part, however, as we have seen, materials exist in various stages of imperfect adaptation to use and in their natural condition and location are capable of contributing little or nothing to the satisfaction of wants. Physical things require, generally, some transformation or relocation before they may be consumed and do not become goods until they have been prepared by man to serve an economic purpose. Even things that have some measure of utility to begin with are of the highest service only when they have been given an additional power to satisfy wants. Some natural products, we have found also, though suitable for utilization in their original state, are so limited in quantity that some effort must be made to increase them. Services, likewise, are generally the result of activity involving cost.

PRODUCTION DEFINED

It appears, therefore, that it is necessary to create goods and services. The processes by which goods and services are created are called production.

Productive activity in its several phases is directed toward the development of useful things out of materials which otherwise would be of no use, toward the addition of utility to things which have little power to satisfy wants, and toward an increase in the number of things which have or may come to have an existence as goods or services. We do not make goods out of nothing, nor do we create the materials from which useful commodities are fash-

ioned. We produce, rather, by directing the creative processes of nature and by adding to physical things and personal acts the quality, called utility, which characterizes them as goods and services.

THE PRODUCTIVE PROCESSES

Obviously, not all productive activity is of the same order nor does it all have exactly the same productive consequences. For a full understanding of production we require, therefore, an analysis of the processes which enter into the creation of utility. One of these processes has to do with the relocation of things which are not so located as to be most useful. The utility contributed in this case has customarily been called place utility. The creation of place utility may be illustrated by two somewhat different operations applied to the same material, namely, those of mining and railway transportation. The former brings minerals from the interior of the earth to the surface, while the latter completes the transportation of the minerals from the source to the consumer. Both operations consist essentially in the relocation of things. A second productive process, the preservation and storage of materials unto a time of greater usefulness, is called the creation of time utility. Warehouses and grain elevators are engaged in thus preserving goods; and merchants who maintain stores from which consumers may draw goods as desired are engaged in part in the same productive operation. The productive operations, of a third sort, which are applied to such materials as are not found in a form immediately satisfactory for use are said to create form utility. The creation of form utility is exemplified by the ordinary processes of manufacture, by which things are changed in condition and physical appearance. A fourth principal productive process is the increase of the quantity of such of those materials as are not created in sufficient supply by nature alone. Agricultural producers are engaged, largely, in the creation of quantity utility, as they are, for instance, when they increase the natural output of such commodities as the grains, forage plants, fibers, and domestic animals.

Manufacturing operations are to be subdivided into three principal processes. One of these, which is called the analytical process, involves the breaking up of raw materials into their consti-

tuent physical or chemical parts. An example may be found among the numerous refining operations of manufacture, such as the refining of petroleum. The outcome is a product or several products each containing something less quantitatively than the original material from which it was derived. Not all the materials eliminated or separated in analytical processes which aim at one main product need be entirely rejected. They may be used instead in other productive operations resulting in by-products. In the meat packing industry there are many by-products. The second process is called the synthetical. It is essentially the combining of several raw materials into one good. The compounding of medicines and the making of bread may serve to illustrate synthetical industries. Synthetical processes also have secondary results in some cases, though in those cases in which the materials used are completely absorbed there is no possibility for the development of by-products. Manufacturing may consist, in the third place, of the assembling of raw materials the identity of each of which is not lost in the finished article. This process is to be observed, for example, in the construction of machinery, furniture, and buildings.

The distinction between form and quantity utility, which appears in the classification of productive processes above, has often been denied, and there are many who assert that production never results in an increase of quantity. The error of those who take this point of view, if they are in error, arises from a failure to confine the analysis of productive activity to its economic aspects. Thus, they say that the production of agricultural commodities is essentially the changing of natural resources into utility, and that the farmer is engaged only in changing the form of the natural elements out of which his products are created. The farmer makes cotton and corn out of the chemical elements of the soil and the air. From the standpoint of the physical scientist, the statement is true, of course; but if we were to analyze the entire field of production in that fashion, we would find that all our processes resolve themselves into the transmutation of natural elements and physical forces in a similar way. The preservation of goods in cold storage would be found to be simply the converting of natural ice or ammonia. The transportation of goods, which we now regard as a part of the place utility process, would become simply

the transformation of fuel and other materials or forces into utility.

From an economic point of view, we are compelled to begin with raw materials in their obvious aspects and differentiate our processes on the basis of the nature of their contributions to the final productive outcome. Storage gives goods availability at a future time; transportation, at a different place. The processes in neither case affect the identity of the goods. There should be no reason for confusing such productive operations with the reworking of metals nor the latter with plant propagation, which results in plants where none grew before. In manufacture, the producer begins with certain materials which he presents later in less, or in substantially the same, quantity but different in physical characteristics and appearance. In the other process, the producer begins with certain plants which are replaced or succeeded by others greater in number and substantially identical with the original in physical characteristics.

The productive processes which involve services, rather than goods, are two in number. Services may be rendered directly, as is the case with much of the so-called professional service utilized by the consumer. Actors, musicians, and public speakers give service directly to those who are to receive the final satisfaction from their productive efforts. The second class of personal services comprises those rendered indirectly through the intermediation of certain consumer's goods. Many productive enterprises are devoted entirely to the supplying of certain conveniences which consumers are to use but not to possess. The concerns conducting these enterprises are not engaged in producing goods, but in providing a service for the consumer by means of goods. Thus, a taxicab company which provides automobiles for the use of customers cannot be said to be creating form, time, place, or quantity utility, but is rendering a service to the customer through its equipment.

It is very difficult at times to draw the line between direct and indirect personal services. Lawyers and surgeons to some extent use books and instruments, respectively, in rendering service, and yet in most particulars their contributions to the satisfaction of wants are direct. There is this one characteristic of the production of personal service, however, which serves invariably to distinguish it from the production of goods. The production of serv-

ices always requires some cooperation or participation on the part of the consumer, while goods may be made in the absence, and independently, of the consumer.

The expressions, form, time, place, and quantity utility, are not descriptive of utility itself nor of the satisfaction received by the consumer. The phrases describe the productive processes only. They indicate that utility has been created or increased and how it was accomplished; but the resulting goods and services take their character from the materials or the nature of the act of service as well as from the productive procedure which we have described.

THE ESSENTIAL NATURE OF PRODUCTION

With the analysis of productive processes before us, we are in a position to examine further the essential nature of production itself. We have reason to do so because of the popular misunderstanding so frequently revealed in this connection. Generally, much greater economic significance is attached to the increase of the quantity of physical things than to any other of the processes which we have described as belonging properly in the field of productive activity—as if there were no benefits derived from form, time, and place utility and from personal services. To increase the quantity of things may be of no greater benefit to the consumer, however, than the mere relocation of goods. By raising live stock, the food supply is augmented. So it is also by the operation of deep-sea fisheries, which are engaged in creating only place utility. It is possible to increase the actual quantities of wool, but to do so may be of no more importance in affording people protection against the weather than the mining of coal. Borax is provided in adequate quantities by nature and is to be had for the taking. Some would say, erroneously of course, that it costs nothing to produce it. It is in fact an act of production to place any such commodity at the disposal of the consumer; for only in this way is the commodity given power to satisfy wants.

Quite commonly, to touch upon another popular error, that part of the productive process which is concerned with physical things is regarded as the only part which is truly creative and of importance to economic life. Those engaged in the law, the ministry, and other intellectual pursuits are sometimes assumed, thus, to be entirely unproductive. They are supposed not to be creating

things as are those, for instance, who manufacture goods. But even the very managers of manufacturing enterprises are regarded by some as superfluous in an economic sense, because they do not engage in manual labor. Similarly, the merchants were held in no repute in former days, because it was thought that they produced nothing. They took goods that were ready for use and charged more for them than the goods had cost. Such attitudes arise from a misconception of the nature of production. It is production simply to contribute to the satisfaction of wants. A physician in rendering service may satisfy a very intense desire on the part of the patient. A teacher may provide instruction which is desired for its own sake or which is necessary to the increase of things. Music may delight people as much as food. The manager creates time and place utility and assists in the preparation of goods. The test of productive activity lies in the answer to the question: does the activity contribute to a greater satisfaction of wants?

In the course of the creation of most of the commodities of which we make use, there is some intermixture of the various productive processes. It is impossible in most cases to determine which of the processes has contributed most to the final utility created, and it would be a mistake to give more credit to one than to another. It will be enlightening to observe how closely interwoven the processes are in the creation of one economic good, as, for instance, a loaf of bread. The farmer first plows and prepares the soil in the field to be planted. He takes the seed out to the field and deposits it in the ground. Natural elements combine to produce the wheat plant and to ripen the grain. The grain is gathered, threshed, and possibly stored on the farm. Presently, it is hauled to a grain elevator where it is sorted and graded. The railway conveys it, and a merchant receives it and holds it until it is required by the flour miller. The wheat is separated into parts, and manufactured flour is transferred, often with the aid of a merchant, to a baker where it is combined with certain ingredients to make bread. The consumer may carry the bread home or have it delivered for him by the baker or by a delivery man. Many acts have combined to produce the bread. If some of them were unnecessary and could have been omitted, they were non-productive; but no one of the actually necessary parts of the process can be considered unproductive, since the bread would not have been produced if any such part had been lacking. Whether the entire

process should have been performed by one individual or by ten is a question of organization, but the productive character of any one of the acts involved is determined by the result.

NON-PRODUCTIVE ACTIVITY

Since labor enters into production and very generally results in an increase of goods or services, we are liable to the mistake of supposing that production always follows the performance of those acts of human beings which we have come to regard as productive. As a matter of fact, one may even receive a reward for an expenditure of costs or an attempted business or personal service regardless of the ineffectiveness of his efforts. Some believe that there are many people whose labors are worth practically nothing and who are able, nevertheless, to command a fair income for their services. At any rate, it needs hardly to be pointed out that some labor yields nothing and that the creation of costs is by no means an evidence of success in production. There is no such close correspondence between the expenditure of time and effort, on the one hand, and the increase of utility, on the other, that the latter may be assumed to be the inevitable outcome of the former. Much activity, as we all know, is utterly futile, and much, also, is only acquisitive and results simply in an opportunity for some one to obtain possession of goods which he has not produced.

It is the confusion of thought to which reference has just been made that underlies the erroneous idea that we gain by making work and creating more jobs even when no corresponding increase of output results. The more effective the work we do, the more the satisfactions we are permitted to enjoy. But to create more tasks or to expend more labor in given tasks without a corresponding increase of output is simply to increase cost rather than goods. It is true that those who receive wages by the day or according to some other time-rate plan may gain by making more work as a means of avoiding unemployment. Their wages are not regularly and invariably proportionate to output, and if they prolong the productive process, they may continue longer to receive wages. Such measures may be temporarily successful as a device for acquiring more cash income; but inasmuch as they do not increase the product out of which wages are to be paid in the long run, they defeat their own ends as permanent policies. Laborers who in-

crease the ratio of cost to product do not promote the success of the productive undertaking upon which they depend for support. Because they do not add to the stock of goods upon which they are to draw for their real incomes, their cash wages are less effective in the purchase of satisfactions than they would otherwise be. The activities which are commonly productive do not meet the test of productivity in particular instances, it may be well to repeat, except as they result in an increase of want-satisfying power through goods and services.

We may illustrate non-productive activity further by the labor of thieves. They often strenuously exert the powers of their minds and bodies with the object of acquiring goods. Yet thieves, as such, are entirely unproductive. Goods that have attained high want-satisfying power are relocated by the efforts of these people at very great cost, but without giving the goods any greater want-satisfying power in themselves than they had when seized. The goods are simply diverted from the satisfaction of one want to that of another, and the result is acquisition but not production. It seems to be the fact that utility is actually destroyed rather than created by the activities of thieves. The goods stolen are used guardedly or secretly, generally, and hence with less satisfaction than would otherwise be possible. They may need also to be worked over to new uses for the thief's protection.

Gamblers, likewise, at great effort and waste of time, accomplish the transfer of the ownership of goods without increasing the adaptation of the goods to human use. It is often the case, also, that those who pretend to speculate by purchasing goods for later sale only acquire for themselves the gains which have been produced by others. Thus, at times, land is purchased in anticipation of increasing land prices for which the purchaser himself may be in no way responsible. Of course, in many cases, those who buy land for later sale do something to make the land more valuable and useful. If they render a service to later purchasers, their labors are to be regarded as productive. But in many cases, the only result is the acquisition of goods rather than their production.

UNECONOMICAL PRODUCTION

A substantial increase of utility is obtained often at a cost which is excessive. The increase of utility under such circumstances fol-

lows upon operations which are productive in character (differing in that particular from the non-productive operations described in the topic above), but which are unsatisfactory from the standpoint of good management. Uneconomical production results in a contribution to the creation of goods or services but at too great a cost. No one may be mistaken as to the unsatisfactory outcome of production in those cases in which the costs clearly exceed the gain, but it is true as well, if we have correctly defined uneconomical production, that the process of creating utility is not properly conducted in any instance in which the costs are higher than they need to be. All such costs are to be regarded as excessive.

Such difficulties are encountered in the ascertainment and measurement of costs that production may incline to the uneconomical even in undertakings which are supposed to be well managed and to be established upon the soundest basis of economy. This may be the result of the failure to keep satisfactory records, or it may be due to the lack of an accurate method of computing costs. In some instances, the result follows from the failure of the manager to appreciate the problem, and to give adequate attention to the fundamental questions, of economy. It often happens, for example, that no proper account is taken of the depreciation of capital. There may be a failure, also, to charge against the gains of present production a part of those costs which are to materialize in the form of expenses to be paid in the future.

Production may involve costs, furthermore, which have social consequences beyond the immediate creation of utility. There are costs which have the serious result of reducing the productivity of the people, though they bear lightly upon the individual enterprise directly concerned. Thus, child labor may be thought to be entirely economical from the standpoint of particular productive operations because of its apparently low cost, when, as a matter of fact, under many circumstances it destroys productive resources through its harmful effects upon the children. It may be found to be a higher real cost to the individual enterprise also than the expense account itself reveals.

Exact calculation thus often discloses the fact that productive results are accomplished at excessive costs and that the sacrifice even exceeds the gain. The conclusion stated is reached alike when the investigation is made from the standpoint of the indi-

vidual and when the interests of the entire economic system are taken into consideration.

THE FACTORS OF PRODUCTION

The part which nature plays in the creation of goods and services is primary and indispensable. The contribution of nature to productive activity is so obvious, furthermore, that it calls for no emphasis beyond that which we have given it in the discussion of the conditioning factors of our economic life. When referring to nature as a factor of production alone, however, we speak of land rather than nature. This practice is due to the importance of land among the natural elements and to the fact that the natural forces are free goods except as they are to be made use of through the utilization of land.

Man also is a factor of production by reason of his contribution of management and labor. His part in production, when viewed as a cost, is called labor, and when viewed as a contribution to the creation of utility is called service. Nevertheless, it has been customary, when referring to man as a factor of production, to speak of him simply as labor. In some measure, man creates satisfactions independently of the other factors. For the most part, however, he directs the activity of the other factors and produces jointly with them. His part is so evidently essential that man alone is commonly spoken of as "the producer."

The third factor is capital. Capital consists, as our earlier definition suggested, of materials, such as metals and fuel, to be used in creating goods; of machinery and appliances, which supplement the physical power of man; of buildings, when used in production; and of domestic animals, which are sources of power in some instances and the substance of goods in others. The elements of capital may be classified from one point of view as fixed and working capital. Fixed capital consists of machines, buildings, and other relatively permanent equipment. Fuel and raw materials are more quickly transformed and are more frequently replaced. For no very good reason, they are called circulating, revolving, or working capital.

Capital is so evidently a derived factor, and labor is so fundamental a factor, that some people contend that all production is to be attributed to labor. With equal reason, we could say that na-

ture is the sole productive element. The three factors are properly to be regarded, nevertheless, as distinct agencies, because, regardless of origin, at the time of any given act of production they exist separately and contribute differently to the result. Man may be stored up natural forces, but the farmer is not identical with the soil and sunshine which cooperate with him in farming. His plow may be materialized labor, but it is the labor of an earlier time and, generally, of another man. Since the factors are thus provided independently in a given instance, they are given independent consideration in management, and their owners are often separately rewarded in the distribution of the product which they jointly create.

THE CREATION OF CAPITAL

Goods do not exist as capital unless they have been set apart to, or have been especially created for, the purposes of production. The process of creating capital by any method by which it may be accomplished is attended by cost. A pioneer who cuts wood and digs coal for his own use as fuel has consumer's goods as a result. If, desiring to manufacture tools for wood-cutting and mining, he diverts some of his supply of wood and coal to use in the process of manufacture, he creates capital out of the goods which he might otherwise have consumed. Inasmuch as the producer is required thus to some extent to forego consumption for the present, he incurs the cost of waiting in creating capital.

The time which the producer takes from other activities and gives to the manufacture of tools, regardless of the diverting of any raw materials, is also a contribution to the increase of capital and involves the special cost of waiting. In order to manufacture tools, the producer turns his attention and effort from the production of consumer's goods and is compelled, consequently, to do with less of the latter for the time being.

There is still a third way in which one may acquire capital and be responsible in part for its creation. Instead of devoting his goods or a part of his productive effort directly to the manufacture of physical capital, he may give some of his present income to others in order to support them during the time that they are to devote their attention to the production of capital and during which, consequently, they are not to undertake to provide directly

for their own needs as consumers. The cost involved, again, is waiting.

The three fundamental processes of capital creation, as such, are very much the same in final effect, for it is only by the direct or indirect diversion of goods from consumption that capital can be created. The goods which are to be used in production, considered simply as goods, are brought into existence by processes which involve the same costs as enter into the creation of other commodities; but, in order that there may be goods set apart, or especially designed, for use in production, there must be, invariably, in addition to other costs, the cost of waiting. In each of the three phases of capital creation, some one consents to forego certain consumption in order to create the means by which there may be an increase of consumption later.

In the actual practice of modern business, the creation of capital is a much more extensive process and involves a great many more transactions than our description of the essential features of the process suggests, though it is not essentially more complicated than it appears to be in the illustration above. The actual creation of capital is accomplished by two principal methods. One method involves saving by consumers, to be followed by the investment of their savings in capital goods already created or to be created later. The second method is the appropriation of a part of the income of an enterprise to the increase or replenishment of its own capital. By the first method, the consumers forego consumption and turn a part of their cash income back into production, where it is converted into the proper form for use. In the other case, the producer himself exchanges a part of the product of his undertaking for such capital goods as his concern may require. This income otherwise would be distributed in the form of cash income to the owners of the business for their use in consumption.

In no case can there be capital unless it is possible to create a surplus of goods over and above the amount that is needed for immediate consumption. To some extent, this is the dilemma of primitive people—that they cannot have capital until they are producing a surplus over necessities, and they can hardly procure that surplus without the aid of capital. In that fact among others lies the explanation of the slow progress of the human race through many centuries and its rapid progress once capital was abundant.

The dilemma of the primitive man is the handicap of many an individual today and explains in part the wide differences in the attainments of individual producers.

INVESTMENT

The application of capital to the task of producing is called investment. Such application may be made directly, as when one employs his own capital in his private business. Quite commonly, however, the investor supplies funds to others, who acquire the particular capital they need by purchase in the market. Sometimes, in doing this, a number of exchanges are required before the income first saved is replaced by the materials needed in the productive operations themselves. The exchange transactions are a part of the investment procedure, and they are the means by which those who give their time largely to production are enabled to draw on the surpluses of many people near and far who have more goods than are necessary to support life and larger sums for investment than can be profitably utilized in their undertakings.

There are transactions, however, of a sort similar to those to which we have had reference, which do not carry with them the essential feature of investment. For instance, the lending of goods is not necessarily the investment of capital. The goods loaned may be devoted to consumption instead of production, as is the case when one lends an automobile for a pleasure trip. It may happen, also, that capital which has been borrowed is accumulated and put to no use at all, as sometimes occurs when funds are borrowed and allowed to lie idle in the bank. Idle funds do not serve the purposes of capital. A third situation involving saving without investment arises when people hoard their savings or put them into the form of diamonds or other treasure, thus holding them out of productive operations and destroying their character as capital.

THE ORGANIZATION OF PRODUCTION

There is comparatively little that can be accomplished by the factors of production operating singly; generally, therefore, there must be some combination of labor with land or of labor with capital to create utility. In many undertakings, in fact, all three ele-

ments are required. Thus, in the simple operation of a very small farm, land, labor, and capital are all necessary. If these elements are to be used economically, each element as a whole and each separate unit as well must be given some certain part of the task of producing. In other words, the factors of production must be combined according to a plan, and the various units of each factor must be assigned a specific function. The process thus set forth is the process of organizing, and the result is that which we call an organization.

The manager of an enterprise may own all the land and capital to be used and himself supply all the labor, but to a great extent the elements of productive undertakings are contributed severally by more than one person. For this reason, organization assumes a double complexity. The factors as such must be assembled and properly employed as one phase of organization, and, in the second place, the interests of the suppliers of the several factors must be adjusted. On the one hand, there is the problem of determining the amount of land, labor, and capital and the exact use to which each unit is to be put, and, on the other hand, the problem of determining the position and the power in the organization to be given to the landowner, the capitalist, and the laborer. In most instances in speaking of organization we have reference to the relations of the members of the personnel—excluding from consideration all units of land and capital as such and excluding even some of those who have contributed land and capital but who have no very continuous relations with the enterprise in question.

The productive system as a whole is constituted in conformity with the same principles as are the individual units of which it is composed. Each of its several parts has its peculiar service to perform. The factors of production thus are knit together in a complex of activities, all of which are directed toward the same general objective; by organization the activities of the producers of the entire world are rendered interdependent. The producers of the world are parts of one economic whole and constitute, collectively, the productive organization.

THE DIVISION OF LABOR

Two principles operate to control the division of functions among the elements of the organization. One is specialization;

the other, diversification. Specialization permits an individual to be devoted to the productive operation for which he is best suited, and allows him to continue at that operation until, by repetition and adjustment, added skill has been attained. Producers thus avoid the waste of time which may be required to pass from task to task and to gain momentum in new operations. Similar gains are possible through the specialization of capital, which can be fitted better to the performance of a single task than to the performance of many. The climate, soil, and other attributes of the land may render economical, and even compel, its specialization also in the creation of a limited number of products.

There are opportunities for three sorts of specialization, which correspond imperfectly, though very imperfectly, to the three factors of production. The three types are geographical, occupational, and operative specialization. Geographical specialization is exemplified by the production of coffee, cane sugar, rice, and tea in tropic and semitropic lands; of wheat, potatoes, apples, and flax in temperate regions; of diamonds and gold in South Africa; and of coal and iron in England. For the most part, the cases of specialization enumerated for illustration are made necessary by the very nature of the resources of the land upon which production in each of the several regions depends. Yet, to some extent, industries peculiar to one land have only slight geographical foundation, and their location has been determined by the character of the available labor, the abundance of capital, or some other such basis of opportunity. To some extent, geographical specialization depends simply upon historic priority and the ability of certain enterprises to hold their own against the competition of others.

The geographical specialization of any particular region is possible only in case other regions undertake a specialization of a different sort so that there may be an exchange of commodities. This is a law of very great importance in the larger economy of the world. It implies, in the first place, that those countries which restrict their intercourse with others may frequently need to forego a great deal of the specialization that they would otherwise be permitted. It sets a limit also to the extent of every particular specialization. Regions which have attained a very high industrial development in a small area are able to maintain themselves only in case other regions remain more sparsely populated. The densely populated regions of northern Europe are complemented

by, and rely upon, sparsely settled tropic lands and colonies in all parts of the world. The very existence of a great city such as New York depends upon the maintenance of certain lands less densely inhabited to be devoted to the production of food supplies, building materials, the fibers needed for clothing, and similar commodities. There could be no such thing as the development of the entire country to the same sort of specialization as that of the great cities. Furthermore, if the regions of the world now given over almost entirely to agriculture develop cities locally to complete their productive organizations, there will cease to be such concentration of activity as there is at present in a few regions and in a limited part of the world.

Occupational specialization results from the division of the activities of production into separate tasks upon the basis of the productive processes involved or the nature of the work required. Thus, the business of merchandising, the manufacture of clothing, ministering to the sick, the building of houses, and the preparation of food are undertakings in which producers are personally and vocationally specialized. Their organizations and the capital and personnel they employ are devoted entirely to one general line of work and the creation of a certain few products. In any one of the occupations, however, there may be many technical operations, each of which calls for a peculiar skill. In the assignment of functions these operations are separated; each is assigned to a different one of the elements of which the organization is composed. The result is operative specialization. Such is modern labor specialization in the factories. The tasks of the specialists of this group are not complete in themselves, and no one of the operatives conducts an entire sequence of productive operations. The division of operations is based often on the specialization of machinery and is both the cause and the result of the improvement of mechanical devices. Operative specialization sometimes rests, therefore, upon the character of the capital used rather than upon the qualities of the laborer.

Specialization may easily be carried too far; consequently, economy requires diversification. Regions which center attention upon a single line of production may neglect and waste valuable resources and thus fail of maximum productivity. Furthermore, the soil is so constituted that it will seldom maintain fertility for agricultural purposes under a one-crop system. Some of the great

economic failures of the peoples of history have been due to over-specialization of the land and underdevelopment of geographical resources. Labor, likewise, can be rendered unproductive by specialization. The very concentration that results in skill may destroy the mind if carried too far. The steady monotony of factory tasks, if unmitigated, results in a decline of output as the day and the week progress and as years pass on. Man, as the soil, may be worn out. To stay this decline, some sort of diversification is necessary. The long and arduous hours on the farm in early days in America were endurable because of the endless variety of tasks, disagreeable as they may have seemed. But if there is no reasonable possibility of diversity in an employment itself, there must be recreation of another sort. An annual vacation, a weekly day of rest, an evening's leisure, and recesses in the day's work may become imperative. Industry must provide diversification as a matter of economic policy, or it must be provided at public expense; otherwise wealth will not reach the possible maximum.

The uncertainty of productive success gives to the specialization of capital an element of risk. To make a great investment in machinery which may come to be of no use at all in a short time is likely to turn out to be an unprofitable and uneconomical use of the producer's resources. Changing styles and changing wants thus introduce risks which limit the specialization of capital even in those cases where by nature the capital goods in question are not liable to such destruction and decline of productivity as are the other factors.

CLASSIFICATION OF PRODUCTIVE ORGANIZATIONS

Productive enterprises are to be classified by the form of their organizations and also according to the specialization of their activities. We shall take up the latter classification first.

1. The extractive industries are engaged in the business of procuring the raw materials and natural products of the earth in their original forms. In certain instances the entire process of production is complete with the simple relocation of the raw materials. Coal may need only to be brought to the surface of the earth. Generally, however, extraction is only a step in the process of preparing goods for consumption and is followed by transportation,

manufacture, and other operations. Extraction is essentially the creation of place utility and involves only such changes in the form of things as are either incidental or inevitable. The organization of an extractive industry may be either very simple or very elaborate. The simplest organization is that of the mining prospector who conducts his operations by hand or with hand tools and very largely alone. It is to be contrasted with the highly capitalized mining companies which operate the great strip and pit mines of the iron fields. Hunting, fishing, and lumbering also are extractive enterprises.

2. The propagative undertakings are those devoted to the improvement of the quality and the increase of the quantity of certain of the raw materials yielded by nature. They have as their basic process the creation of quantity utility. In the propagative group belong most of our agricultural enterprises and forestry and fish culture. Propagative organization is required to adjust itself to many productive situations, but there are not often concerns of such great size as exist in other fields. The farms differ in the amount of capital used, the number of persons employed or concerned, the acreage included in a productive unit, and in the quality and nature of the management controlling them. The plantation is an undertaking which makes use of a large tract of land and often of equipment similar to that required by factories. In some cases, many laborers are employed. The ranch, which is commonly devoted to stock raising, makes a less intensive use of large acreage and has less labor and mechanical capital. There are small farms of diversified agriculture with highly specialized equipment which produce certain principal, or "money," crops and numerous lesser commodities. Some farms are given to the production of a single crop. Some are only gardens operated on a small scale and largely by hand labor.

3. The refining, reshaping, combining, and assembling of raw materials is called manufacture. It includes the treatment of ores and the refining of other minerals, the manufacture of textiles, the completion of the processes of food production, the building of structures for the use of producers and consumers, the making of machines, and the creation of power, heat, and light. Manufacturers commonly make use of relatively large amounts of highly specialized capital and labor. Their organizations vary, however,

from the simple form of the handicraft and home industries, where the work is performed very largely by hand and in small establishments, to the factories which produce chiefly by machinery and with the aid of very few laborers.

4. Commercial concerns are organized to attend to the transfer of goods from one owner to another, as do wholesale and retail houses. They create time and place utility and afford a business service to the productive organization. Their characteristic activity is buying and selling, but they assume numerous functions which are properly incidental to their principal activity. Among these functions are transportation and storage. The latter are so much a part of the commercial function that the railways and warehouses, though not directly engaged in the buying and selling of goods, are to be regarded as adjuncts of the general commercial establishment. They provide a business service to commerce, as do advertising and collection agencies.

5. The financial enterprises assist other producers, and to some extent consumers, in connection with the processes of investment and the making of payments. The general financial organization includes the banks and similar concerns.

6. The productive establishment includes, also, certain concerns specialized in the assumption of risk and in the protection of producers and consumers against the extraordinary losses which may come from an ineffective management of risk. They provide a business service which is commonly called insurance. The risk-bearing enterprises and the commercial and financial structures are to be described at greater length in later chapters.

7. The professions are independent enterprises offering personal services to the consumer and business services to various other parts of the productive organization. The latter services are rendered indiscriminately to producers in all kinds of enterprises, for the members of this group generally are not attached to any one part of the organization described above. The contribution of the producer of this group is peculiarly a personal product and is exemplified by the service performed by those in the legal, medical, educational, and governmental occupations.

While this classification discloses the characteristics of our most

clearly differentiated productive enterprises, it is not to be supposed that every concern is so regularly specialized that its place in the classification may easily be determined. Furthermore, other likeness and unlikeness may be revealed by different classifications. For instance, classes one and three and the transportation agencies of class four are known, generally, as the industries. They have similar problems of management and make use of organizations that have very much in common. It is the custom also to refer to the activities of the producers of classes one, two and three, exclusively, as production. It is in these enterprises that the physical identity of goods is fixed. We know, of course, that the enterprises of the other classes are also productive, but there is some reason for distinguishing between the groups in this way.

IV

THE NATURE AND ORGANIZATION OF PRODUCTION
(Continued)

Cooperative and non-cooperative concerns. The enterpriser and the proprietor. Sole proprietorship. The partnership. The corporation. Intermediate forms. Corporate securities. Advantage and disadvantages of the different forms of organization. Combinations of corporations. The economic and the legal units of organization. Operative organization and control. The management. The departments. The subordinate personnel.

For obvious reasons, productive units in the modern world differ considerably in internal organization from those social units that have principally non-economic functions. The relations of the elements, or persons, that constitute a social club, a religious group, or a political society are necessarily in many ways unlike those that prevail in such economic organizations as are appropriate to retail stores, mining ventures, and manufacturing enterprises. The members of a social club do not submit to personal dictation and control as do the employees in a store, nor do the managers and clerks in a retail establishment submit to assessments to meet current expenses as the members of social clubs often do. Bosses and inspectors have functions to perform in a mine, but they seem out of place in a church. On the other hand, bishops, elders, and deacons belong to religious establishments and have no place in the organization of a mine. Judges and sheriffs represent the authority of the law; salesmen and credit managers are factors of business. Citizens and legislators belong to political societies, while stockholders and boards of directors belong to economic enterprises.

Before concluding this chapter we shall undertake to fix in mind, in outline at least, the characteristics of business organization as distinguished from other social organization. But productive enterprises differ also among themselves in the form of their organizations and especially in the relations that are created as a matter of organization among those who are more or less directly concerned with management. The various productive units, which we have classified in the preceding chapter according to their activ-

ities, may well be classified now, therefore, upon the basis of these newly suggested differences in order that we may see more clearly the nature of the contractual relations upon which business organization is based.

COOPERATIVE AND NON-COOPERATIVE CONCERNS

Cooperative and non-cooperative concerns differ in the distribution of responsibility and the location of the power of control among the several persons interested. Those concerns may be called cooperative in which all the functions, including management, are performed by the members of a single group and in which, consequently, the members of this group are rewarded by the distribution of the earnings among themselves. In non-cooperative concerns the members of one or more groups are the agents or employees of another group or an individual, the latter having entire control of the assignment of duties and the apportionment of earnings. Complete cooperation is to be found, therefore, in those organizations in which the land, labor, and capital are provided entirely by one group of persons, who select officers and managers from among themselves. In such concerns there are no permanent outside interests contributing to the activities of the undertaking and none, consequently, exercising any control or requiring remuneration. There are no employees as a separate group. Furthermore, the members bear the losses as well as share the gains. In non-cooperative organization, the ultimate responsibility for success is confined to one or a few among the entire group of contributors. This group assumes the risks of the business, meets the losses, while guaranteeing to others a stipulated reward, and receives the profits remaining after the stipulated claims have been paid out of the earnings. Capital, land, management, and subordinate labor may be contributed entirely separately in non-cooperative concerns or be combined in various ways. It is usual for the risk-bearing or controlling factor to possess also a part at least of the capital.

Complete cooperation is very rare, and the strictly non-cooperative organization is the prevalent form. Intermediately, there have grown up numerous partially cooperative concerns which follow the cooperative plan in some one phase of their productive activity. They may be said to approach complete cooperation as

the union of interests becomes more perfect and as the elements not included in membership become unimportant. Consumers establish cooperation in purchases by combining informally to order goods from wholesalers or by establishing retail stores for their own convenience. They may provide the capital, conduct the purchasing, and receive the benefits in lower prices or "patronage dividends," that is, dividends, or rewards, distributed among the cooperators according to the amount of the purchases each has made. If the consumers' cooperative concerns make purchases for members only, the result is complete cooperation in purchasing. Sellers' cooperation is found among farmers in their control of grain elevators and creameries. These enterprises afford the farmers access to the markets for their grain and dairy products. They have, ordinarily, an equal vote in the control of the business, share the costs, and receive returns in higher selling prices or in patronage dividends. If the farmers conduct a business for the services of the public in general and thus become agents of those who are not members, they take the position of merchants rather than cooperators in selling, and their activities fail to conform in full to the cooperative plan. Cooperative borrowing has reached a high development in parts of Europe and is growing in extent in the United States. In a few instances, cooperative manufacturing concerns have attained practically, if not absolutely, to the cooperative ideal.

Many so-called cooperative concerns fail to meet the test of even partial cooperation. Frequently they are organized as stock companies; the initial capital is provided by a group not coinciding with the patrons, and the income is distributed to two groups, overlapping, but separately rewarded. Additional capital is borrowed and guaranteed a fixed return. These features add complexity and tend toward the localization of responsibility within the organization.

THE ENTERPRISER AND THE PROPRIETOR

In every organization there is some element which assumes responsibility, if not for the initiation of the undertaking, at least for its fundamental control and ultimate success. There is some one in the organization, in other words, who stands in the position of sponsor. The function of this essential person is performed in

the cooperative organization by the entire personnel; in concerns of the other type it is performed by the one or more individuals who are regarded popularly and legally as owners of the business. Because it takes these different forms, when speaking of the element of ultimate control in a business organization in an economic sense, we make use of the name enterpriser, or *entrepreneur*. When regarded as the owner of a business and as the one legally responsible for its contractual obligations, the enterpriser is known as the proprietor.

Since control is sometimes in the hands of a group of persons, there must be some plan for the determination, in such cases, of the relations of the several elements of the proprietorship to each other in the conduct of the business. Furthermore, whether the proprietor is one person or many, the organization for which he is responsible is under the necessity of establishing and maintaining business relations with other producers and with consumers. There are creditors, customers, the state, and others who have at least a temporary interest in the concern's affairs. While the transactions with outside parties may be handled by separate and private agreements, and many of them are necessarily so, the definition of the relations of a productive unit to all those in any way involved in its affairs is very properly a matter of organization.

It is possible to create standard forms of business association, upon the basis of the nature of the two sorts of relations to which we have just referred, which will clarify and simplify the rights and duties of the elements of the proprietorship among themselves and avoid the necessity of great detail in contracts with outside interests. The responsibility of the owners of a business enterprise is a matter of such legal consequence that certain forms of business organization designed to accomplish the purposes mentioned are recognized and established by law. They are adapted primarily to the prevailing non-cooperative enterprise, though the law has recently made special provision for the establishment of cooperative associations also.

SOLE PROPRIETORSHIP

The business conducted upon the responsibility of one person alone is the simplest of the recognized forms of business organization. The sole proprietor may actually operate his enterprise

either singly or with the aid of employees, and he may use his own capital alone or borrow from others. In any case, he assumes the full legal responsibility for the fulfillment of business contracts and has full power to direct, reorganize, and dispose of the business at will.

There is no express legal formality required for the establishment of an enterprise organized according to the sole proprietorship plan. There are restrictions, of course, which make it difficult or impossible to engage in certain undertakings under any form of organization. Thus, gambling and the selling of liquor are in some jurisdictions contrary to the criminal code. The government reserves to itself alone the privilege of carrying the mails and of the coinage of money. The public authority occasionally creates monopolies by the granting of patents which limit individual opportunity. Certain requirements may need to be met before one may enter the practice of law or medicine, and the regulations with regard to the payment of registration fees and special taxes, and the discretion exercised by governmental bodies in the granting of franchises and licenses also constitute practical limitations in many cases. Because of the great importance to the public of certain services such as banking, there is a tendency on the part of the state to specify by law the exact form of organization to be employed in rendering those services. All these restrictions are indirect, however, and are not intended to control the creation of sole proprietorships as such. So long as the business to be undertaken is not illegal, especially subject to regulation, or specifically reserved to the state itself (and there are comparatively few of these when the whole field of enterprise is taken into account), one may establish, change the nature and scope of his business, and discontinue it entirely at will. Such great freedom is consistent only with the very full responsibility, and the proprietor is held, consequently, to be personally liable for all legal obligations to the extent of his possessions, whether they are employed in the business or otherwise.

THE PARTNERSHIP

When two or more individuals agree to unite in conducting a business, they may form a partnership. The partnership form of organization is based entirely upon the contract of the parties.

No procedure at law is necessary, therefore; but the partners need to agree among themselves upon such matters as the duration of their association, the name of the firm, the place of doing business, the nature of the business to be conducted, the amount of capital to be provided by each, the duties of the partners, the compensation each is to receive, the distribution of profits and losses, and adjustments at dissolution. The contract may be either oral or written, and it often happens that a partnership is created simply by the acts of two or more persons who join in an undertaking without express agreement upon the fundamental matters enumerated. In such instances, the partners are held to the same rights and duties in their relations with third parties as would be the case if they had formally organized. A formal contract is called "articles of copartnership."

The partnership relation is dissolved by the death or bankruptcy of any member, by the sale of his entire interest, by his voluntary withdrawal, whether a definite date for termination is provided in the agreement or not, as well as by such causes as would terminate any business undertaking. Changes in the nature of the business may be made at any time by the consent of all the partners.

Since the control of the partnership and the part each member is to take in the conduct of the business is determined, ordinarily, by an agreement, the partners may construct their internal organization according to their own pleasure. Upon their failure to define their personal relations, however, the law steps in to decide certain, at least, of their respective rights and duties. Thus, in the absence of an agreement to the contrary, each partner shares equally in the net profits of the business and accepts an equal share of the losses. Also, in such circumstances, each member of the concern has the same power of control as any other member, regardless of the amount of capital he may have contributed; and decisions are made by majority vote so far as they are within the scope of the business.

In relations with the public, all partners are regarded as equal, in the absence of notice to the contrary, and each may represent the firm in business transactions. Each has power to bind the others within the scope of the business. The members are jointly liable for the debts of the firm, and claims against the firm are satisfied, when necessary, by suit against all the members jointly and

execution of the judgment by levying upon the property of the firm or the separate property of any one of the partners. As in the case of the sole proprietorship, each member is liable, personally, for the debts of the firm to the full extent of his personal and business possessions. It is impossible for the public to know the terms of partnership agreements, and by these provisions it becomes unnecessary for them to distinguish the individual partners from the firm as a whole.

THE CORPORATION

It is now possible, under the laws of the various states, for a number of individuals to create an organization in such manner that it may itself act as one person in the conduct of business. The corporation, created for this purpose, is an artificial person, separate and distinct in the eyes of the law from the natural persons organizing it or otherwise interested in it. The corporation possesses property to which no member of the group of shareholders has title. It may buy and sell and make contracts in the absence of those whom we are to regard as its proprietors. It may sue and be sued in its own name, though the partnership sues and is sued in the names of all the members of the partnership. A corporation may be insolvent when its members are solvent.

A corporation may be created only under the laws of the state or nation. Its constitution is not a contract, but a charter. The charter is granted, usually, under the terms of a general law (though formerly the legislatures granted many special charters), and is issued by the secretary of the state, the judge of a court, or other authorized official. The charter, which is sometimes called the certificate of incorporation or the articles of association, indicates the name of the concern, generally an impersonal one, the location of the chief office, the nature of the business to be undertaken, the amount of capital to be subscribed and the number of shares into which it is to be divided, the limitations on indebtedness, and similar fundamental matters. The organizers of the corporation who supply its initial capital, and their successors, or those who otherwise acquire interest in the capital, are called shareholders.

The shareholders of a corporation are not permitted to act for

the concern. They are not the corporation and may not be assumed to be its agents. It acts entirely through officers. Each stockholder may deal with the corporation as a stranger might, sue it and be sued by it. Furthermore, the shares are transferable, and the corporation continues to exist though the entire body of shareholders may have changed many times. The death or insolvency of a shareholder does not affect the course of the business affairs in which he was interested as shareholder. The corporation may be terminated by the expiration of its charter, by legal action in case of offenses at law or in the case of insolvency, or by methods provided in the charter itself.

The comparative permanency of the corporation and the public control of corporate affairs which is provided for in the charter and in the law of the state are of advantage to the public in dealing with the corporation and make possible the limitation of the liability for corporate debts to the property in the possession of the corporation itself. The corporation is said to have limited liability. The shareholder has no direct liability whatever for the contractual obligations of the business, though, of course, he may lose whatever he has contributed to the organization, and his share, or interest, in the corporation may become worthless as a result of suits against the latter. In the case of banks generally, and in some states of all corporations, there exists a "double liability." The shareholder is then personally liable for an amount equal to the nominal value of his share in the business.

Because of the formalities required in the creation of corporations, they are not as easily established as are sole proprietorships and partnerships. The purposes for which they are created are set forth in the charter, and consequently the nature of the business in which they engage may not be changed entirely at the will of the management. While business organizations of other kinds may do anything not forbidden by law, a corporation may do only those things definitely permitted to it. To some extent even the internal organization is fixed by law, and it is not possible in any case to modify the rights and duties of the members by simple contract. Dissolution requires the observance of certain formalities. These restrictions are made necessary by the very impersonal relation which exists between the members, or shareholders, and they constitute a protection to the public in dealing with a concern enjoying the privilege of limited liability.

INTERMEDIATE FORMS

The limited partnership approaches very nearly to the form of the partnership itself. Generally, in the former there are partners who manage the business with full personal liability. In addition, there are special partners who only contribute capital and who are liable only to the amount of their several investments. Various other intermediate forms, known as limited partnership associations, joint stock companies, and by other names, approach more nearly to the corporation in form. Their capital is divided into shares which are readily transferable, with the result that the concerns are not subject to sudden termination; but they are created by contract and without the privilege of limited liability. The common law, or "Massachusetts," trust, now coming to be widely used, is an organization which avoids the restrictions of the law relating to corporations and yet provides for limited liability by vesting the property and control of the business in a board of trustees, which issues certificates to the owners of the business and which stipulates in all contracts with outside parties that no personal liability whatever shall attach to the trustees or to the certificate holders.

CORPORATE SECURITIES

In some respects, the shareholder appears to be only an investor rather than a proprietor of a business. His interest in the business is evidenced by a "stock certificate" showing how many shares of the stock of capital, or the capital stock, he is entitled to. The total capital stock and the separate shares are both denominated almost universally in terms of their supposed value. Thus, the capitalization of the concern may be said to be $1,000,000, divided into shares of $100 each. It is presumed that each shareholder has contributed $100 for his share and, hence, owns that amount. The latter sum is called the par value of a share of stock. The presumption is not always in conformity with the facts, and even where the amount contributed was exactly equal to the par, or face or nominal, value of the share of stock, the stockholder's proportionate share of the present actual capital, as shown in the accounts or books of the concern, may be much more or much less. The book value of the total capital and of each

share, therefore, does not always correspond to its face, or par, value.

The position of the stockholder in corporate affairs is indicated by the language of the stock certificate. The form of one of these certificates is reproduced herewith.

INCORPORATED UNDER THE LAWS OF THE STATE OF ILLINOIS

This certificate is transferable either in Chicago or Boston

C 0193096 SWIFT AND COMPANY 5 shares

This certifies that Helen M. Black is the owner of five shares of the par value of One Hundred Dollars each, fully paid and non-assessable, in the capital stock of Swift and Company, transferable in person or by attorney upon surrender of this certificate properly endorsed. This certificate is not valid until countersigned by the Transfer Agent and the Registrar. In witness whereof the said Company has caused this certificate to be signed by its duly authorized officers and sealed with its corporate seal.

Signature of the Secretary {corporate seal} *Signature of the President*

Corporations secure capital also by borrowing. The resulting loans may be evidenced by any of the numerous credit instruments to which reference has been made before; but when permanent capital is borrowed, the evidence of debt is in the form, generally, of a number of bonds. These bonds differ from personal promissory notes in that they are printed from engraved plates and issued in large numbers of only one or a few denominations and in that they run for a much longer time than notes. Thus, the corporation may borrow $100,000 by issuing 100 fifty-year bonds of $1,000 each. The par value of each bond is $1,000, and the bond is always a legal claim against the concern for that amount. The bondholder does not have an exclusive property right in any particular part of the capital of the concern, but he is entitled regularly to a part of the income to be paid as interest and, finally, to an amount equal to the face value of the bond, which is the principal of the debt.

Bonds are written in much the same form in most cases, though the details of various contracts between bondholders and corporations are very different. In the form presented below, the language which refers to the protection of the creditor and to similar matters has been deleted.

$1,000 $1,000

STANDARD GAS AND ELECTRIC COMPANY
TWENTY-YEAR SIX PER CENT GOLD NOTE

No. M9208

Standard Gas and Electric Company, a Corporation, organized and existing under the laws of the State of Delaware, ... hereby promises to pay to bearer, or in case this note is registered, to the registered owner hereof, at the office of the Guaranty Trust Company of New York, in New York City, on the first day of October, 1935, the sum of

One Thousand Dollars ($1,000)

in gold coin of the United States of America of, or equal to, the standard weight and fineness existing October 1, 1915, with interest thereon from October 1, 1915, until paid at the rate of Six Per Cent per annum . . . . in like gold coin, semi-annually, on the first days of April and October of each year.

. . . .

. . . .

In Witness Whereof, Standard Gas and Electric Company has caused this note to be signed by its President or a Vice President, and its corporate seal to be hereto affixed. . . . .

{corporate seal} Standard Gas and Electric Company
(Signature of Vice President)

Attest:
(Signature of Assistant Secretary)

The position of the bondholder may be compared and contrasted with that of the stockholder. Neither is entitled exclusively to any particular part of the corporation's capital. The bondholder may demand a certain sum upon the maturity of his bond, however, while there is no time when the stockholder may require of the concern the amount of his property claim except at dissolution. The stockholder's interest in the business continues as long as the corporation continues, except as he may sell his interest to some one else. When the distribution of the corporate assets finally is made, he is entitled, not necessarily to the amount of his original contribution, but to his proportionate share of whatever is left after the claims of bondholders and other creditors are met, be it more or less. During the life of the business, the stockholder can claim his proportionate share of the income of the business if there is any after prior claims are met and if the officers of the corporation decide to distribute it; but

the bondholders have a legal claim to a definite amount periodically without fail. The stockholder is not simply an investor, therefore; he assumes the risks of the business. If the business is unsuccessful, he may lose his entire investment; if it succeeds, he may gain accordingly. He is the enterpriser.

The shares of stock and the bonds are called corporate securities. Sometimes preferred shares are issued, giving the holders a preference in the payment of dividends and, occasionally, in the distribution of the capital or assets. When a corporation issues shares of stock without receiving in return capital equal to their par value, the stock is said to be watered. Generally, stock watering occurs when shares are sold at less than par or are given as a gift to those already holding stock. However, if the corporation has actually accumulated assets, out of income or otherwise, equal to the shares thus given out, there can hardly be said to be any water in the stock; therefore, in one view of the matter, watered stock is simply that which does not have a book value equal to its face value, regardless of the conditions under which it was issued. Purchasers at second hand are often confused and deceived by watered stock, supposing, as they sometimes do, that the face value of stock always indicates an actual investment. Watered stock may, in fact, be either more or less valuable in reality than other stock, since its value in the market depends upon the profits of the corporation.

There are several reasons why corporations may desire to issue watered stock. It may be easier to sell a large issue of securities at a discount than a small issue at par. Secondly, concerns that are making very high profits may prefer to pay a moderate dividend on a large number of shares than an exceptionally high dividend on a few. The dividend rates affect the attitudes of investors, customers, and the public generally. The purpose underlying the watering of stock, therefore, is not always an improper one. Yet the government, desiring to restrict the earnings of the railways and other such enterprises to a fair rate on the actual capital, has discovered that the watering of stock makes possible a low dividend rate, because of the excessive number of shares, when the rate on the actual capital of the corporation is very high. Excessive issues of stock make it possible thus to deceive the public as to the actual earnings of regulated concerns. For such reasons as these, to say nothing of sound managerial

policy, the deliberate issuance of stock without full payment in return has met with general disfavor.

ADVANTAGES AND DISADVANTAGES OF THE DIFFERENT FORMS OF ORGANIZATION

The advantages of the sole proprietorship lie chiefly in the ease with which it may be created, reorganized, and dissolved, and in its flexibility of form. No limitations of any sort prevent its being made exactly what the requirements of the individual case may dictate. Its disadvantages are the difficulty it encounters in procuring great amounts of capital and the great liability incurred by the proprietor. Unlimited liability actually increases borrowing power, since the proprietor is able to offer greater security than would otherwise be the case; but in practically all cases he must provide the principal funds himself, and he will not often possess as much as could be assembled by a corporation. It occasionally happens, also, that the very burden of management is so great as to make the sole proprietorship inadvisable in a given enterprise. The sole proprietorship is the prevailing form in agriculture, and it is suitable for any undertaking for which the capital and the capacity of the owner are adequate.

The partnership has the advantages of the simpler form of organization and permits, in addition, the assembling of greater aggregates of capital. It also enables owners of funds and talented managers to combine their respective resources. In organizations of both of these forms, the personal liability of the proprietors is an incentive to careful management. In the partnership, as compared to both the corporation and the sole proprietorship, however, division of counsel may destroy the effect of this incentive. The partnership is at a disadvantage also in that expert management is less often assured in concerns under the direct supervision of the proprietors than in those in which affairs are conducted by salaried officers chosen as employees, as they are in corporations. The liability of the partnership, furthermore, is often excessive, and the ease with which the business may be disrupted is a serious handicap. Partnerships are found most frequently among professional men and in mercantile and small manufacturing establishments.

The corporation suffers somewhat from inflexibility and from

the limitation of powers imposed by the charter. It is subject, also, to organization fees and to taxes and restrictive legislation which others escape. It gains, on the other hand, from the expertness and unity in management made possible by the concentration of power in its directors and officers, from stability and permanency, and from its ability to command greater supplies of capital than other organizations are ordinarily able to command. From the standpoint of the community, the point of most significance is the facility afforded for the investment of funds. An extensive variety of securities differing in kind and size have been devised to meet the needs of many investors. The securities are freely bought and sold. The man with small savings is thus enabled to participate in business without committing himself for any definite length of time and without assuming great liability for losses and responsibility for management. Of course, there are other devices to accomplish the same purpose, but the corporation does serve to unite small savings for the building of great enterprises. The corporation in this way may be the servant of the small man, and, contrary to popular impression, the stockholders of numerous concerns are numbered by the thousands. There are many corporations with 10,000 members and several have more than 100,000.

The popular conception of the corporation as the servant of the very wealthy arises from the spectacular position in business held by a few concerns; and the disfavor into which the corporation has fallen in the minds of some is due to certain abuses regrettably incident to the development of modern industry. The thousands of small local and family corporations are overshadowed by the greater ones identified with some multi-millionaire, and, in the same way, the temporary mismanagement of one concern receives more attention than many years of conservative control in another. There is no doubt that the corporation lends itself to abuses. The great power of a few majority stockholders when exercised by the dishonest and unscrupulous makes possible the manipulation of the finances of the business against the interests of the minority. The speculative buying and selling of securities also may be so influenced by dominating interests in the business that a few may reap profits from fluctuating values to the detriment of others and of the business itself. The very reliability of some corporate investments has its unfavorable aspect. People of large means

may depend entirely upon such securities for their incomes, absolved thus from the labor of management and free from the burden of considerable risk. An opportunity such as these people have is a source of social gain when offered to the public-spirited, but when permitted to the selfish and the parasitical, it increases the menace of idleness and degenerative leisure.

COMBINATIONS OF CORPORATIONS

In the past fifty years there have developed corporations of great size without which, no doubt, many of the striking industrial achievements of the period would have been impossible. To be distinguished from this tendency to great size is the development of combinations of corporations. Supposedly, one cause underlay both: the greater economy of large-scale operations and of unified management. Combinations, at least, had as an additional incentive the prospect of the elimination of competition and of the control of prices. The merits and the advantages of large-scale production and the measures taken to protect the public and competitors from the undesirable consequences of the growth of combinations are matters for later discussion. Most of the forms of combination are now to some extent under the ban of the law.

Aside from differences in the form of association, combinations are of two principal kinds, called vertical and horizontal combinations. The union of concerns engaged in the same field of production but performing respectively successive steps in a single process of production or in a sequence of processes contributing and necessary to the creation of one product, constitutes a vertical combination. The United States Steel Corporation now contains such a vertical arrangement. It has combined iron mines, railways and steamships, blast furnaces and rolling mills, and an extensive selling organization. All the steps in the process of creating and selling finished steel are in the hands of this one company. Such an enterprise is called an integrated enterprise. The corporation in control may have several strong competitors. Horizontal combination is effected by the union of concerns which are engaged in the same operation and which are generally, therefore, competitors. A union of all the blast furnaces in the country, of all the rolling mills, or of the iron mines, would constitute a

horizontal combination. The Steel Corporation was in part a combination of this sort also.

One of the earliest devices used in the building of combinations was the trust agreement. A board of trustees was authorized under a "deed of trust" to take over the stock of all the concerns to be combined and issue to the owners trust certificates instead. The original owners voted the stock and thus controlled all the firms and regulated their affairs in harmony. The Standard Oil Company, the Sugar Trust, and others were organized in the decade following 1880. In recent years combinations of all sorts and some great corporations not involved in any combination have been known popularly as "trusts."

When trusts were declared illegal, corporations were organized to act as holding companies. These corporations did not engage in productive operations, but issued their own securities to purchase those of the concerns to be united. Practically the entire possessions of such a company would consist of the stock of concerns to be controlled. As owner of the stock of the several concerns, the holding company could direct and control them. The Rock Island Company, and the Chicago, Rock Island and Pacific Railroad Company were holding companies superimposed on the Chicago, Rock Island and Pacific Railway Company and others. In some instances, an operating company has undertaken to control others by the simple process of purchasing a controlling interest in its stock, and subsidiary companies are often organized to be thus controlled from the beginning.

Equally effective, and generally more permanent, are the actual amalgamations and mergers of corporations by which, in one case, the constituents lose their identity or disappear to be supplanted by a new company, or, in another case, one of the combining companies absorbs the others. Less formal are the simple personal agreements among officers of competing concerns which are known as "gentlemen's agreements," the formation of supposedly nonbusiness associations which may arrange an understanding among the members through committees, and the creation of cooperative selling bureaus which maintain uniform prices among the contributing concerns. Of historic importance, also, are the pools once formed among the railways and among steel, textile, powder, and other manufacturers. These were agreements either to divide the sales on a prearranged basis or to take the business offered as

it came and then divide a portion of the earnings. Most recently the prevailing method of combination has been the creation of "community of interest." A group of related or friendly business men secure the majority stock of a number of competing firms and are able thus to control them in harmony. The interlocking directorates, which involve the membership of one or several men in all the boards of directors of the various concerns to be united or controlled, are similar in character.

These forms of business organization are not uneconomical in themselves and consequently have not been entirely eliminated. The objections to them arise from the use which has been made of them.

THE ECONOMIC AND THE LEGAL UNITS OF ORGANIZATION

It is to be expected that in the ordinary course of affairs each business association will be concerned with only one productive undertaking, but this is not always the case in reality. A partnership or a corporation may find it advisable to operate several different enterprises. It becomes necessary, therefore, for us to distinguish the business association itself from the economic units it has under its control. The economic unit of production comprises only those factors and that part of any organization which is engaged in one productive activity. That activity need not include only a single process. There may be either one product to be created or several. But, in any case, all the elements of a particular organization which are to be regarded as a part of a single productive unit in the economic sense must be joined in the work of production. A partnership which conducted a farm and a mine would have under its control two productive activities, and even though some persons were engaged in both, the two economic organizations would not be so completely interwoven as to constitute a single unit. A corporation which produced raw materials, attended to transportation, manufactured goods, and maintained retail stores would find that its personnel and capital were so separately engaged that the enterprise could be divided into many parts under independent control without interfering with the activity of any of them. The costs in each of its economic units would properly be set over against the product of that unit alone, and separate accounts could be kept for each of the cor-

poration's establishments. On the other hand, a farmer, though he creates many products, or a merchant who renders many services and sells numerous commodities may not be able to set out a certain part of his organization and equipment as belonging so definitely to one phase of his productive activity as to constitute a complete enterprise in itself. He has, therefore, only one economic unit under his control. The test of the unity of any business undertaking may be found in whether or not there are parts which may be operated separately without substantially changing the nature of the results.

OPERATIVE ORGANIZATION AND CONTROL

From the standpoint of the law, organizations differ principally in the matter of legal liability. In operative organization and the routine conduct of business, they differ chiefly in the matter of the relation of the owners to the immediate management of affairs. In the sole proprietorship and partnership, the ownership and management are commonly combined in the same hands. In the corporation, the control exercised by the shareholder is of a general nature and only very indirectly determines the scope and character of business operations. Partners and sole proprietors may direct every detail of their affairs by formal or informal methods. The shareholders of a corporation vote in an annual meeting, enacting by-laws to control the selection of officers, assigning their duties, and controlling the policy of the concern in important matters. They elect a board of directors, which, as a body, is the legal agent of the corporation. The board elects a chairman and such officers for the conduct of the concern's business as are required—a president, vice president, secretary, and treasurer, at least.

While there is a fundamental difference in the position of the enterpriser or proprietor, the subordinate organization may be exactly the same in partnership and corporation. The partners may hold offices which correspond exactly to those filled in a corporation by appointment or election by the board of directors. Most concerns, if size justifies, are divided into specialized departments upon the basis of a division of the productive operations. The nature and extent of the departmental divisions depends upon the nature and size of the enterprise and not upon

the form of its proprietorship. Generally, there is to be found some operative specialization within each of the major or departmental divisions. This also is a matter of operative organization alone and is unaffected by the form of proprietary association. The relation of the management to the departments, and of the department heads to subordinate personnel, is not necessarily affected by the relation of the proprietor to the active management of the organization.

THE MANAGEMENT

As a matter of operative organization alone, therefore, every concern has a president, or general manager, under some name or other. If this officer is not a proprietor himself, he represents the proprietor and is the connecting link between the owners, partners, or stockholders, and the operating machine. The owners transmit plans to the president, who is responsible for their practical execution. The subordinate organization transmits the report of the success of its operations in carrying out these plans and such information as might lead to the revision of the plans to the owners of the concern through the president. The chief general officer, therefore, is the adviser of the proprietor as well as the instructor of the dependent organization.

In the actual conduct of operations, the manager is specialized in the same sense as is any laborer. By the necessity of the case, he is compelled to assume definite duties. We sometimes speak of the manager's task of general supervision as if he had every duty but no particular one. There are many tasks, even of supervision, which are specifically assigned to subordinates, and there are a few which belong to the manager. It is not the proper function of the manager to undertake the performance of other duties than his own, and since he exercises control very largely through other officers, there are many matters in which he does not permit himself to interfere directly. It is his specific duty to see that the concern is provided with capital and to undertake very directly the acquisition of capital. It is his business to select and employ, and also replace, the principal members of the personnel. He has the task of organizing the force, planning the program of activities, and devising a system under which the work of the concern may be effectively conducted.

The general manager, or president, brings to his assistance such parts of the organization as may be most helpful to him in particular instances. Generally, in the larger establishments, there is an executive or administrative committee composed of the chief officers and heads of departments. They advise and assist the president without assuming responsibility for his decisions. In the better organization of recent days, the principal committee is made up of those who are likely to be most helpful regardless of their superior or inferior positions in other matters, and in some cases it is constituted differently on different occasions as the questions for discussion may suggest. The committees thus assembled are quasi-legislative in character. They bring information and arguments to bear upon the issues of the firm's policy and help to direct its development by working out the details of administrative plans. They make adjustments in personal relations where conflicts arise. The president and his immediate advisors, including the executive committee, sometimes the corporate board of directors, or certain principal officers acting individually, constitute that part of the organization which is called "the management."

THE DEPARTMENTS

While there is, and must be, a development and adaptation of plans of operative organization to the needs of individual enterprises, there are certain operations so generally to be performed in production and to be provided for in so many of our productive undertakings that there is a tendency toward some uniformity in the division of organizations into departments and in other matters as well. We may describe the characteristic departmental division with modern factory organization chiefly in mind.

The management of a factory will find in all probability that there are the following tasks to be performed in the preparation and disposition of the product. Raw materials are to be purchased; laborers are to be employed; the physical operations of manufacture are to be conducted; tools, machinery, and buildings are to be taken care of; raw materials and finished goods are to be stored; customers are to be obtained; credit investigations are to be made; transportation is to be arranged for with railways; goods are to be packed and shipped; correspondence is to be

carried on; information is to be collected and filed for use; accounts and cost records are to be prepared; receipts and disbursements are to be attended to; and cash is to be put in safe-keeping. There may be matters requiring legal procedure, and still other affairs demanding less frequent attention may engage the time and effort of some part of the organization.

For the sake of the best possible supervision of these operations, they must be grouped upon the basis of their similarity, upon the basis of some relation of one to another, or upon some other principle of organization. Certain of the productive activities are primary and differ so obviously from each other that they are almost invariably the foundations of departmental divisions. Certain activities are put under the control of the same superintendent, on the other hand, because they bear upon the same phase of the productive process, though they are themselves very dissimilar in character. The physical operations of manufacture are conducted by one department, which is called the production department. It is under the control of a superintendent or manager. Those operations which have to do with selling are under the direction of a sales manager in a sales or selling department. Where there is purchasing of such frequence and importance as to justify it, there may be a general purchasing agent in charge of a separate department. Almost invariably there is a treasurer. The accounting department is supervised by a controller or chief accountant. In this way, few or many departments may be created as policy in the individual case may dictate. Retail establishments divide their organizations differently and apply different names to their officers and superintendents. Nevertheless, there is a close analogy between retail departments and these we have enumerated. Even small concerns which do not have personnels large enough to justify divisions in their organizations, at least classify their operations, perfectly or imperfectly, in a manner similar to that followed by the factories.

THE SUBORDINATE PERSONNEL

Every unit of the personnel is given a place in the productive establishment upon the basis of some division of labor, whether or not that division of labor is revealed in departmental and other divisions of the organization. In other words, in accordance with

the first principle of organization, each person is given a specific task and is assigned a definite function. But the assignment of the laborer to a task and to a particular division or subdivision of the organization is not a complete definition of his relations to the other members of the personnel. The definition of personal relations is a matter of further arrangement, and a very important one also. The position of a laborer, using the word "laborer" in a broad sense, involves sometimes a power over others and generally some subordination to others. There must be some provision in the fundamental plan of organization, therefore, for the regular exercise of authority over minor officers and workmen. Often, in factories, a superintendent has under him foremen, and these govern bosses who have direct contact with the workmen. But there is another plan under which the laborer is given expert supervision in each phase of his work by several specialized inspectors or instructors. One of these is the so-called military plan, the other, the functional plan.

Organization, as it concerns the subordinate personnel, is not completed even by the creation of the relation of supervisor and supervised. Some satisfactory definition of the relation of the employee to the proprietor and of his rights and duties under his contract of employment is imperative. The employee is to be recognized in the fundamental plan as an element in the productive organization in much the same way as is the partner or the stockholder. The obvious fact is that he constitutes such an element, and the difficulty there may sometimes be in defining and adjusting his relation to the proprietor is not a sufficient reason for ignoring the fact. The employee in modern organization often has his committees or a representation upon some council in which the management or the proprietor is represented and in which matters which concern both parties are attended to. Or the plan may require that the employee deal only with his immediate superiors and only as an individual. Where his relation to the enterprise is considered an impersonal and purely contractual one, he may have no more voice in the conduct of the concern's affairs than a creditor or a silent partner.

V

THE COSTS OF PRODUCTION

The measurement of costs. The expenses of production. Rent, interest, and wages. Materials, maintenance, and replacement. External payments for services. Profits. Fixed charges and variable expenses. General and particular expenses. Joint costs. Variability in costs. Increasing costs; diminishing returns. Decreasing costs; increasing returns. Constant costs and the alternation of tendencies. Costs and the scale of production. Uniformity of costs.

COSTS are not by nature a detriment or hindrance to production. They are, rather, an essential element in the productive process and are indispensable to the creation of goods and services. Of course, many items of cost in particular cases are unnecessary and constitute an expenditure for which no return is received. Risk is one cost that is invariably unproductive and consequently is to be avoided to the extent that the attainment of economic objectives will permit. It is substantially true, however, that the majority of the outlays and sacrifices which constitute the costs of production are an indirect means of satisfying wants, for they are also the contributions of the factors of production to the creation of utility. The words "cost" and "contribution" represent two views of the same thing. The creation of utility is the direct outcome of operations consisting fundamentally of labor, waiting, and the utilization of land and capital. These operations do not simply involve cost; they actually constitute cost. Since there can be no production without them, costs may not be said to destroy or prevent the creation of goods and services but rather to make the creation of goods and services possible.

Cost cannot be entirely eliminated except by the abandonment of productive activity, but the burden of cost can be reduced as the ratio of cost to product is effectively and properly controlled. The object of this control is essentially the avoidance of unnecessary cost, a result which is to be accomplished by, and which is the equivalent of, the fullest and most effective use of the productive organization and machinery.

THE MEASUREMENT OF COSTS

Costs are so generally identified in thought, and even in practice, with expenses, that producers who do not make payments to cover every contribution to their productive operations and every loss incurred often fail to discover a part of the burden of cost which they actually bear. Producers are not compelled to keep an account of fundamental costs which involve no cash outlay, and they may easily fall into the error of omitting such costs in calculating the offset to the productive results of their undertakings. Merchants and farmers are able, frequently, to provide all the land, labor, and capital they require without drawing upon the resources of others with whom they would need to make contracts of payment. If they neglect then to keep accurate records of their own expenditures of time and fail to charge against the business income the interest upon their own investments at a proper rate, they may carry on production at a loss without becoming aware of the fact. Any computation of costs which for any cause fails to reveal the total burden to be borne is obviously defective and unsatisfactory.

I. The first requirement of measurement, therefore, is that every element of cost, in whatever form incurred, be included in the computation of costs for any specific purpose.

To avoid the error of omitting costs, as well as to make the records of business more intelligible and useful, the managers of productive enterprises commonly enter all known costs upon the records, whether or not the costs so entered involve cash payments and constitute actual expenses. The producer thus charges against the productive results, or, as we say, against the business, the cost of the use of his own land and capital at the rate that he would probably have to pay if he acquired land and capital from others. In a similar way, he enters a charge for his own labor and for all losses of materials and other costs as though they were to be met with immediate cash outlays; and he then regards them as expenses. In the classification of expenses to follow we shall have this practice in mind.

II. The second requirement of measurement is that costs be compared with the productive results for the attainment of which the costs were incurred. Costs and results may be thus com-

pared either separately or in the aggregate. We may give attention to the latter method first.

(*a*) Since aggregate costs constitute an offset to the utility created in a particular undertaking, the costs incurred in that undertaking are to be regarded either as high or low only as they stand in favorable or unfavorable ratio to the productive output to which they relate. Inasmuch as all costs are recorded upon the books in the terms of expenses and the productive output, similarly, is stated in terms of cash income, we may express the same idea by saying that *expenses are to be measured in ratio to total income.* An outlay to the amount of $1,000 is a great expense if the compensating income is less than $1,000, but the same sum amounts to a low expense if it results in an income of $5,000. Such a comparison of expenses and total income indicates, superfically at least, the business success or failure of the producer.

(*b*) The second comparison is *between each separate burden incurred and the specific gains which are to be expected from it.* A concern with a very low total expense rate might find the cost of the employment of some one laborer to be much too high in proportion to his contribution to productive results. Wages are high, in some instances, not only in the sense that the income of the laborer is great as compared to that of other laborers or that the payments made to him are larger than those made to some one else (matters of no significance in themselves in the measurement of costs), but also in the sense that his contribution to production is low. Because of the difference in productivity, the very low wages paid in some economically underdeveloped countries are an extremely high cost when compared with the high wages of a developed country with its educated, skilled, and effective labor. Whether one particular cost is higher than another depends, therefore, upon the relation of the two costs to the actual creation of utility and not upon the comparative sizes of the payments made by the producer. A measurement of costs may be made, then, with the effectiveness of the factors of production, rather than the income of the productive enterprise, as a gage.

(*c*) Costs are to be measured also for the purpose of ascertaining *the outlay necessary for the production of a unit of output.* It is often very difficult, however, to relate the costs of production in proper proportions to the separate units of product. The pro-

ducer may have correctly calculated the total burden, and he may have selected the most effective factors of production and procured them at very favorable rates, and yet have no way of knowing which of his operations are most profitable and which of the products he has created have actually cost him the least. We shall return to the producer's problem of cost keeping in a later discussion, but at this point we may suggest difficulties which confront us in almost every attempt to find the absolutely necessary elements in the cost of ordinary goods.

At various steps in the process of production, there are expenditures which represent unenumerated costs. During the productive process, the initial and many subsequent costs are transmitted from person to person, appear on successive records, and are expressed at different times in different ways. A payment for raw materials may include some compensation for labor. An expenditure in settlement for a business service may include a reward for risk taking. All the activities of a particular productive organization may be rewarded by the returns from a sale of its product to another producer, and thus the costs of labor, of the creation and use of capital, of raw materials entering into the article sold, and of the risks of the proprietor are all joined in one item of expense to the purchasing producer. It is not difficult, in these cases, to discover aggregate costs, but it is impossible to find the causes of an apparently excessive final cost unless we are able to trace the entire productive process and separate the several items which have entered into the creation of the total. The consumer is interested in just such an analysis and measurement of the costs of production, particularly in times when prices are high.

III. As a matter of administration, actual costs are to be compared, finally, with possible costs. No costs are low enough which are higher than they need to be. If, by better management, actual costs in particular or in general can be reduced in ratio to the product created or to the income received by its sale, the costs are too high until such economy has been effected.

THE EXPENSES OF PRODUCTION

The characteristic expenses of production fall naturally, for purposes of classification, into four groups. First, there are the

payments which are made to those who provide the factors of production. The laborers and managers, the owners of the land, buildings, and equipment used in the productive operations, and all those who supply funds with which land and capital are acquired are contributors of the factors of production, and are rewarded as such. There are certain expenses, secondly, which are made necessary by the use of raw materials, and others which are caused by the depreciation of land and capital. The expenses of this group are intended to keep the factors of production intact and to preserve their usefulness. The third group of expenses includes those that are occasioned by the use of business services created by producers who are external to the organization bearing the expense. Professional men such as lawyers, the agencies of the government, and companies that assist in the management of risk are recipients of payments which may serve as illustrations. The fourth principal expense is the payment or allowance which must be made to the proprietor himself for his services, particularly in the assumption of risk and responsibility. His share of the income is known as profits.

RENT, INTEREST, AND WAGES

Rent is the payment made for the use of such land, buildings, and equipment as are not owned by the proprietor himself. Land and buildings are more frequently the subject of rent agreements than is equipment, but in some instances fixtures, machinery, and vehicles are acquired under contracts of lease which call for the payment of stated sums to the owner. When, for the purpose of keeping a record of costs, the manager charges against the business an item of rent for any unit of land and fixed capital owned by the proprietor himself, the item is properly to be called imputed rent.

In most instances, the rent payment constitutes a return to the owner for the use of his land or capital and goes to compensate him simply for the cost involved in placing his resources at the disposal of the acquiring producer. In other instances, however, the rent payment includes an element of compensation to the owner for other costs. For example, the owner may run some risk of failure to receive payment according to contract. He may be entitled to some reward also for his assumption of the burden

of maintenance or upkeep in a particular transaction. Maintenance is ordinarily to be taken care of by the manager and it constitutes one of his principal costs; but when by contract it is left to the owner, the latter may exact a higher return in the form of rent. There are instances, also, in which the owner of rented land shares in the management of production and bears a part of the risk of failure in production. Thus, in share farming, the owner of the land has a voice in the decision as to the use to be made of the land, and his income depends in part upon the success of the farmer's venture. The average rent received under such circumstances tends to be higher than under circumstances in which the owner bears no such burdens.

Interest is the payment made to compensate those, other than the proprietors, who have provided funds for the purchase of land and capital to be used in production. The payment must be adequate to cover at least the cost of the waiting which is involved in the creating of the funds and which must continue as long as they are invested. The minimum sum, thus defined, is known as net, or pure, interest. The actual interest payment, or the gross interest, may include certain other elements. The investor is subject to certain risks in placing his capital in almost any one of the numerous enterprises open to him. He may need to go to considerable trouble to find a place for his investment and to arrange for its reinvestment. In this way, he undertakes some of the burdens of a manager, the cost of which is included in the payment of interest. If the borrowing producer is able to offer an absolutely safe investment and to make it possible for the investor to continue or discontinue his investment at will, the cost is lower, and the interest payment may be less.

An allowance of interest to the proprietor himself upon his investment in the productive resources of the business is to be called imputed interest.

Wages is the payment made to cover the labor cost of production. The wage payment is to be understood to include wages in the ordinary sense of the word and also salaries, commissions, and all such other items as may go to reward those who in their capacities either as laborers or managers contribute their services as a part of the productive organization. The salary or other special compensation which the proprietor sets apart for himself as a reward for the time and attention he gives to the business in

the capacity of an officer or laborer is of the nature of imputed wages.

MATERIALS, MAINTENANCE, AND REPLACEMENT

In all production which is to result in goods rather than services, there must be an expenditure for raw materials or partly finished goods to be used as a basis of the new product. Most producers, therefore, need to make repeated outlays for, or purchases of, goods. A concern may begin business with a complete stock of raw materials which it has acquired as a part of the capital of the concern and even with borrowed funds. There may be interest payments to be made constantly, therefore, on the goods as a part of the capital. But if the goods are to be used, they will need to be entirely replaced in each cycle of the productive operations. The expense is practically the same, therefore, whether it appears upon the books as a cost of raw materials or as a replacement of working capital.

The necessity of expenditures for the maintenance of land, buildings, and permanent equipment varies considerably with the individual case. In favored locations and under the most skillful management, the fertility of a farm may be constantly and almost automatically renewed, and the land may be preserved, therefore, without cost. Maintenance in this case is consistent with most profitable use and requires no expenditures which might be said to offset the productive gains. In other situations, however, it is necessary to use fertilizer, to allow the land to lie fallow, or to plant it occasionally to comparatively unprofitable crops. The cost involved in so doing can be designated as the maintenance cost.

Capital is very obviously subject to depreciation. Buildings and machinery are so affected by use as to be frequently in need of repair. Whether they are repaired or not, they deteriorate, generally, with the lapse of time and require ultimately to be replaced by others. If it is inadvisable directly to replace them, the investment in them must be turned to other uses. Regardless of physical deterioration, capital is subject, furthermore, to gradual or even sudden obsolescence, and provision must be made for the recovery of such losses as are thus occasioned. Unless the product of an enterprise is sufficient to provide for the upkeep and replace-

ment of its capital in addition to providing for all other costs, the enterprise is conducted at a loss.

When land and capital are abundant, new units may sometimes be substituted for old ones more easily and economically than the old can be repaired or maintained. Under certain circumstances, it would mean progress to abandon the old. For the most part, that procedure is not to be considered, and neglect of the depreciation of land and capital in general is to be regarded as calamitous. It was very generally assumed in the past that labor could be expected to attend to its own upkeep, and in so far as it failed to do so, the producer would do better to discharge a too greatly depreciated labor and employ new help than to go to the expense of constant maintenance. These appear to have been false assumptions so far as hired labor under factory conditions is concerned. Laborers are not always as farsighted as they should be, and they often neglect considerations of health and future power and strength. They may even be under some practical compulsion to do so. We now recognize that fact. We also recognize that stunted and under-vitalized children are factors of production as uneconomical as faulty and broken machinery, and that overworked and depreciated men and women yield the same pitiful return to industry as does depleted soil. The diseased and crippled workmen who are eliminated annually from production are an economic loss which would compare, possibly, with the destruction of the entire capital of a city and a loss which is equally unfortunate in its consequences to production, to say nothing of other consequences, some of which may be equally disastrous.

EXTERNAL PAYMENTS FOR SERVICES

The expenses of production include the payment of taxes levied by the state. Because economic activity depends upon the existence of organized government, taxes are a necessary burden to be borne somewhere in the economic system. As taxes are now levied, it is assumed that the productive organization should pay, in part at least, the costs of the services rendered by the government in the protection and promotion of business. Some of these services seem rather remote from specific productive undertakings, but a very large proportion of them are such as the taxpaying en-

terprise would need to provide for itself by means of its own if they were not provided by society instead.

The premiums which are paid to insurance companies are intended to cover the risk of the destruction of capital, to protect enterprises against losses occasioned by the death or disability of managers or by accidents to workmen, and, in general, to cover all manner of risks variously involved in enterprises of every kind. The determination of the exact amount of risk involved in any undertaking is a difficult problem of management, and the proper amount of expense to be incurred for protection is a matter not to be calculated by such direct reference to the necessities of the process of production itself as is the case with other expenses.

There can be no complete statement of the charges to be met by the producer in his dealings with business concerns other than his own except by an enumeration of all the services of which an enterprise might make use. The two charges mentioned are the ones which almost invariably find a place in the list of expenses.

PROFITS

In the general practice of business, profits are not regarded as an expense, since in specific instances there is no absolute requirement that they be paid. To a very great extent, however, profits are compensation for certain costs, and they are the sole compensation to the proprietor for the burden of risk and responsibility which he is compelled to bear. If there were no profits, enterprisers would not undertake production; profits, therefore, constitute a proper, and in the long run necessary, charge against business. Only those enterprises may be considered to be economically successful which provide a reward for every cost involved in their activities.

In some cases, the profits actually paid, or total profit, include elements which might have been set out as imputed rent, interest, or wages. Thus the dividends of corporations include an enterpriser's reward, or true profit, and compensation to the stockholder for his investment. The profits of partners are sometimes to be attributed partly to their investments and to their personal services as officers or laborers as well as to services which they render strictly as proprietors. It is quite as reasonable to con-

sider a part at least of such profits as an expense as to so consider the periodic interest or salary payments which the proprietors might have received instead if they had simply handled their accounts differently. But even the true profit is largely a reward to one of the factors of production, and only that part of the true profit which is exceptional, fortuitous, and unearned is a pure profit in the popular sense and to be excluded from all computations of expenses. The pure profit is sometimes very great; in many other cases the total profits are less than a fair return to the proprietor for his services as enterpriser.

There are good reasons why, in the practice of business, profits are to be separated from expenses; but when we speak of the costs of production in later discussions we shall refer to the services of the enterpriser as well as to other costs unless we specifically state otherwise.

FIXED CHARGES AND VARIABLE EXPENSES

Those expenses which do not vary directly with the specific activities of production are called fixed charges. Taxes, insurance, rent, certain salaries, and the interest on the permanent capital generally must be paid whether the concern is operating at full capacity or not operating at all. The costs enumerated are constant and do not increase or decrease in amount with the expansion or contraction of productive operations. Wages, fuel, and the expenditures for raw materials increase and decrease as the scope of the operations and the amount of product created are increased or diminished. The latter expenses are variable. Some of the charges which appear as fixed items in one case are variable in another.

GENERAL AND PARTICULAR EXPENSES

When we come to the calculation of the cost of each unit of the product, we find that the expenses differ among themselves in the extent to which they directly or indirectly affect the character of the productive output. Those which are of most immediate consequence in this respect are called the prime costs. In the manufacture of any commodity, the raw materials used and the labor applied to the commodity itself are prime costs. Less directly involved, though having a bearing on the same operations, are the

"overhead," or indirect, expenses which in manufacturing are called factory burden or factory expense. They include all of those costs incurred in providing the land, the buildings, and the capital used in the treatment of the commodity to be produced or in the creation of the service to be rendered to the consumer. Beyond these costs, there are various administrative expenditures and the cost of selling the product, which also are sometimes called overhead expenses or, more accurately, general expenses. The general expenses include the upkeep of the general office, the salaries of officers and directors, and the appropriations made for the work of such departments as the treasury and the department of audits and accounts.

JOINT COSTS

The general and the indirect expenses represent costs which belong to no particular unit of the product and to no one of the several products of different kinds which an enterprise may turn out. They are costs which are shared by all the parts of the productive result, and they enter into the creation of each part. Such costs are joint costs. They are to be apportioned by some rule to the various units of output, but they do not pertain separately to those units.

Very many productive processes result in a single product. It is in such cases that costs are most easily distributed among the units of output. In some enterprises, materials are set out as production proceeds and are taken up and started through a separate treatment to appear finally as by-products. The by-products and the principal article are created in part jointly and at costs not to be attributed to either alone nor to be divided accurately between them. In another case, two products are evolved throughout from the same series of operations. In such circumstances, even the prime costs are joint costs. Thus, to use a familiar illustration, beef and hides are produced together so far as the farmer's part is concerned, and likewise, cotton and cottonseed. All the costs involved in the production of one belong as well to the other. One can calculate what it costs to produce both, but no one can say exactly what it costs to produce either considered separately.

Most commodities go through so many processes from ultimate sources to ultimate consumer that they are likely to have shared

with others at some point some of the general expenses of production at least. That fact complicates the computation of unit costs, but only in the extreme instance does it make it impossible or purely arbitrary.

VARIABILITY IN COSTS

All production may be subject to increases or decreases in costs because of changes in the prices of the materials used and in the prevailing rent, interest, and wage rates. An individual concern may find its costs lower or higher, secondly, as its labor and capital requirements vary and as its management is more or less successful in controlling costs. Such changes may mean business gains or losses. A third variation is due to the change in unit costs which sometimes takes place with an increase or decrease in total productive output. The third variation is of such economic significance as to call for further explanation.

We find by experiment that the cost of producing any unit of a commodity may vary as the quantity produced is increased or decreased. Let it be assumed, for illustration, that we undertake the cultivation of wheat on new prairie land. At first, the labor of one man with meager equipment is provided, with a resulting crop of only 6 bushels an acre. We may represent the costs per acre as $3x$ and the cost per bushel, consequently, as $\frac{1}{2}x$. By increasing the amount of equipment, we are able to secure a yield of 9 bushels an acre at a cost of $4x$. An additional man is employed with a gain in production of 3 bushels an acre at a cost of $5x$, and the yield may be increased to 15 bushels an acre by increasing costs to $6x$. So far, the additions to the quantity produced have been accomplished at a decreasing cost per bushel. We soon find, however, that the process cannot be continued with these results indefinitely. To secure a yield of 18 bushels, it is found necessary to increase the costs to $8x$, which represents a somewhat higher cost per bushel than had been encountered in the last step. Twenty-one bushels may be had at a cost of $10x$; 24 at $12x$; 27 at $15x$; and 30 at $20x$. These later additions to the quantity produced have been accompanied by increasing costs, and each succeeding step, though possibly still profitable, is less so than the last one. A point may be reached where costs are so high that further increases in quantity are entirely unprofitable.

The experiment may be represented as follows:

Yield per acre.	6	9	12	15	18	21	24	27	30
Cost per acre.	$3x$	$4x$	$5x$	$6x$	$8x$	$10x$	$12x$	$15x$	$20x$
Cost per bushel.	$\frac{x}{2}$	$\frac{4x}{9}$	$\frac{5x}{12}$	$\frac{2x}{5}$	$\frac{4x}{9}$	$\frac{10x}{21}$	$\frac{x}{2}$	$\frac{5x}{9}$	$\frac{2x}{3}$
Cost per bushel, $x=\$1$ (approximately).	50c	45c	42c	40c	44c	47c	50c	55c	66c

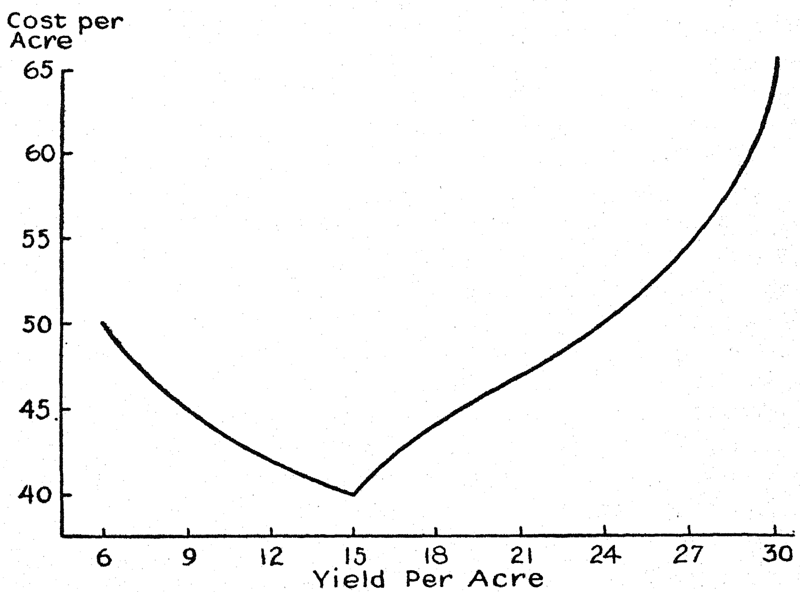


Figure 1: Cost tendencies.

There are thus two tendencies, one toward an increase and the other toward a decrease of costs per unit of product. One or the other of the tendencies will appear ordinarily whenever there is an attempt to expand production without a proportionate increase in the amounts of all the factors of production used. When there is increased production but for any reason these tendencies are absent or in abeyance, costs are said to be constant.

The operation of these tendencies may be affected by changes in the efficiency of the factors of production, by improvements in

methods and processes, and by advances in the quality of management. The improvement of farm machinery and the rotation of crops thus might interrupt the tendency toward increasing costs. Such causes, however, do not finally eliminate the tendency, and we need only to qualify our statement of the law by adding that its operation depends upon the existence of certain conditions or the absence of others.

INCREASING COSTS; DIMINISHING RETURNS

The explanation of increasing costs lies principally in the fact that there are physical limitations to the use which may be made of any unit of land, labor, or capital. A farmer may put his machinery to better use in some instances by cultivating more land. A manufacturer may increase the output of his laborers by giving them more and better machinery to work with. But, in any case, the attempt to increase output by adding other elements to fixed amounts of capital or labor results sooner or later in increasing costs per unit of product until a point is reached where the costs exceed the gain, and ultimately where no additional product is received. Land may be intensively cultivated, but there is a point beyond which nature may be made to yield nothing additional at all. One may secure surprisingly large quantities of grain from an acre of land, but by no economy or magic can its productivity be expanded interminably. People may be crowded by thousands into one small island which is used as the site of a city. By means of labor and capital, the capacity of the island may be increased—but not without limit. Minerals may be found in certain places in great abundance, but all such supplies may be exhausted. As the limit of production or the point of exhaustion is approached, it becomes exceedingly difficult and costly to secure each added unit of product. Long before the point of no added product is reached, the cost of the increase will have exceeded the gain.

Increasing costs are not so often encountered in industries which make use principally of labor and capital as in those dependent upon land. There is no very great necessity for attempting to expand production while maintaining fixed amounts of the two factors. There are supplies of labor and capital upon which anyone may draw as his undertaking grows. But there is no

such possibility of adjusting the supply of land to one's needs. Practically speaking, therefore, increasing costs are due chiefly to the limited productivity of land and affect all enterprises which are chiefly dependent upon natural resources. Most of the farm lands of settled countries have reached the point of increasing costs, and though other concerns are affected by the same tendency to some extent, the farms and the mines are our best examples.

What may be said of the intensive use of any plot of farm or building land or of any mine applies as well to the use of our natural resources considered in the aggregate. The expansion of agriculture into new regions results in bringing into cultivation less and less fertile lands until production can no longer be extended. When rich mineral deposits have been worked to the no-profit point, less valuable ores are utilized. The miners may penetrate further into the earth or migrate to new sources of supply, but either step is from more profitable to less profitable production. Favored locations for building sites are taken first. More room may be secured by moving up or outward. Either procedure is attended with the same inevitable variation in the relation of the costs to the gain. When considering the consequences of this tendency to production in general, we are inclined to emphasize the relative decrease of product per unit of cost rather than the increasing cost per unit of output. We speak then of "diminishing returns" rather than increasing costs.

DECREASING COSTS; INCREASING RETURNS

Enterprises which have a great potential productive power which is not fully utilized at the start display the tendency to decreasing costs as production increases. There are two rather distinct cases in which this may occur. An enterprise which requires from the beginning a great outlay of capital, as does a railway, incurs at the outset a very high percentage of all the costs necessary to the greatest possible expansion of its activity. The railway needs land, terminals, engines, cars, employees, and managers at the beginning regardless of the amount of business done. If the railway must devote all this equipment to the handling of a few passengers, the cost per passenger must be very high. The cost of transporting a thousand passengers would not be proportionately greater. One man in a train may be carried a short

distance at a cost to the road, let us say, of \$2. Two men could be carried the same distance at a cost of \$1 each. Thus, as business expands until a train is filled with passengers, the cost per passenger is found by dividing the same expenses at each step, with some relatively slight additions, into a constantly greater number of unit costs. Cars may be added, more trains operated, double tracks laid, and other expansion effected to accommodate growing traffic without proportionately increasing the cost per unit of service rendered, for there are great expenses of a general nature which are not increased, but rather are distributed among the more numerous units of service. The costs appear, therefore, in decreasing amounts per unit of product.

We are not likely to find producers beginning business with a supply of labor far beyond immediate needs, and we turn, therefore, for another illustration of the tendency to decreasing costs, to agricultural enterprises. In the example of the wheat farm presented above, the full productive power of the land was not brought into play in the first season's operations. There was land which was not put to full use in the very beginning. Each additional bushel produced for a time was procured at a relatively slight addition to costs, as was each service of transportation in the other instance.

CONSTANT COSTS AND THE ALTERNATION OF TENDENCIES

Enterprises which are not limited in their expansion by natural resources and which operate without fixed charges are least affected by the tendencies just described. Such concerns are permitted to make, and do in fact make, additions to their personnel and equipment which are nearly proportionate to the expansion of production which they undertake. When business declines, they are in a position to make corresponding reductions. When a concern has only prime costs to deal with and has no indirect or general expenses, it may keep the cost per unit of product practically constant.

There is great difficulty, however, in finding satisfactory illustrations of constant cost. There are some merchants who buy and sell without the use of any capital and who are able, therefore, to handle as many orders and make as many sales as their time permits at practically the same cost per sale. But whenever any

fixed operating or general expenses enter into calculation or there is a fixed productive factor to be taken into account, expansion is possible only under one or the other of the two tendencies. A merchant tailor may plan to buy materials only in case he has an order for a suit of clothes, and he may increase and decrease his force of workmen as business seems to warrant. There may be little difference in the cost of making a suit whether he makes few or many. However, rent is a fixed charge for the tailor. His equipment and his own services are costs which continue at all times. These costs are to be distributed among the units of product, and costs are high per unit when little is done. On the other hand, the attempt of any such concern to increase output without increasing the labor force would meet ultimately the tendency to increasing costs.

The two tendencies, and constant cost itself, frequently, or we may even say generally, each involve an alternation of increasing and decreasing costs. Many enterprises which are governed principally by one tendency are, nevertheless, affected by both. As was shown in our first illustration of this matter (Figure 1), one tendency may govern for a time and be followed by the other. There is often, in fact, such frequent alternation of tendencies that that which seems to be either increasing or decreasing cost is only the predominance of the one tendency over the other.

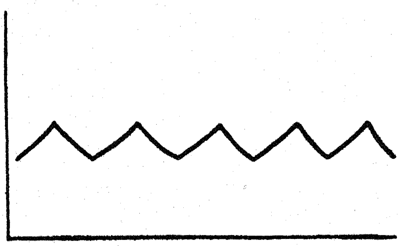


Figure 2: Constant costs.

Thus, in such a business as the railway, each new installment of equipment checks for a time the prevailing tendency. Costs are higher by reason of the occasional exceptional outlay. When illustrated by the graph (Figure 3), the curve of decreasing costs becomes an irregular line with a general trend downward. It is much the same with the tendency to

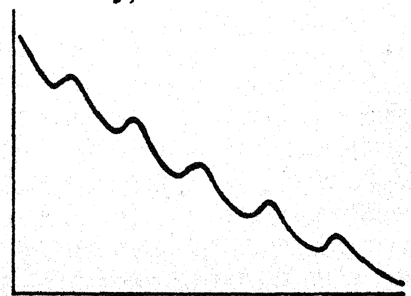


Figure 3: Decreasing costs.

increasing costs. In the improvement of his land, the farmer may make a very considerable capital investment at one time, as he might do by providing subsoil drainage by tiling. While there is an increase of expense at the time, the result is a fixed charge which is lower per unit when spread over a larger output. Every exceptional outlay is followed by a period in which expansion in production continues without constant additions to expense to the same extent. The tendency toward decreasing costs thus enters in to counteract in a measure the general trend toward higher costs per unit of product.

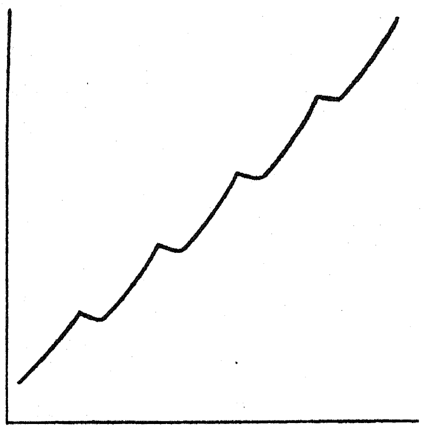


Figure 4: Increasing costs.

Increasing and decreasing costs are not influences which affect every business. Most producers have set certain limits to the scope of their enterprises and have attained a certain stability in their production. They are not all pushing on to greater size and attempting an increase in output. They are not affected by these tendencies except as they attempt an increase, and then only if some element of the factors of which they make use remains fixed in quantity.

COSTS AND THE SCALE OF PRODUCTION

Some enterprises, for reasons peculiar to the undertakings themselves, are better conducted upon a large than a small, scale. Some require great machinery which is very costly. Some perform a service, as does the railway, which makes it necessary that they operate over wide areas and distribute their products to many people. In great cities, valuable sites can be used economically only by those who can put them to use in ventures of considerable consequence. This is a matter of no concern to us at this point unless we find that there is some relation between the costs of production and the size of the undertaking in which they are incurred. We are not interested primarily in the fact that some

large concerns have low costs or high nor in the fact that some particular productive undertakings are better handled by concerns of a certain size. The question is rather whether or not there is any invariable or even generally existing relation between costs and size itself. Such a relation would exist if it were found to be the rule that large-scale production is conducted at lower cost than is small-scale production. It would not follow that all enterprises could be large ones, but there would then be economy in promoting large-scale production.

The supposed economies of large-scale production have often been offered as an explanation of its appearance and as an economic justification of it. Great enterprises are assumed to have been organized to take advantage of these lower costs, or, at least, after having come into existence, to have been sustained by them. Among the supposed economies of large-scale production there have often been named the following: a greater specialization in management and labor force; a use of better equipment; a more economical use of power; avoidance of waste, particularly by the making of by-products; lower transportation rates by reason of carload shipments; purchases at better prices because of the large quantity purchased; a distribution of general expenses over more units of product; and, particularly, a lower unit cost in selling. That some of these economies have existed, at least in certain large enterprises, is not to be doubted. That they are attendant upon large-scale production as such has not been established. In fact there has been little evidence brought to bear upon the question. The claim that large-scale production is peculiarly economical is made by those who have the "industries" chiefly in mind, but there is little proof that economies actually exist in industry as a matter of size alone.

It is obvious that many relatively small concerns are able to control costs in the same manner and to the same effect as the great industrial corporations do. Small concerns receive and make shipments of goods in carload lots; they operate to full capacity and so utilize their organizations as to spread general expenses to the maximum; they succeed in selling their output at very little expense, often by one contract for the entire output; they specialize their personnel; they buy equipment fully adequate to their needs. Agriculture makes use of the by-product economies, though the farms are conducted upon a small scale. The small banks pay

high dividends though they deal in no very considerable sums. In enterprises of certain types, many of the alleged economies of the great manufacturers have no significance, but, even in manufacturing, large and small enterprises exist side by side, compete with each other, and alike meet failure and success. We are not able to conclude from the evidence available that costs are a function of size.

We have seen that concerns which have a relatively large amount of capital to begin with may be affected by the tendency to decreasing costs. The law of decreasing costs has reference, however, to the relation of such a factor as capital to the expansion of production, and it does not follow that, because a concern has a large amount of capital, it operates under the tendency toward decreasing costs. It is not to be assumed, either, that every business of decreasing costs need be a large one. Any concern which has provided itself with the factors of production in an amount to make possible a considerable expansion in production may find itself favored by the tendency toward decreasing costs as its business is expanded to the full capacity of the concern. To perform the railway service of the country adequately, an enormous capital is required, but the electric light plant of a small village may show the same characteristic tendency in costs. The managers of the two enterprises may need to follow the same principles in management.

UNIFORMITY OF COSTS

Our discussion of costs has dealt chiefly with the classification of the costs of an individual enterprise and with the tendencies which may appear as one concern expands or contracts its activity or as it comes to operate from time to time under different conditions of environment and management. We have considered the relation of the costs of one enterprise to those of another only so far as to suggest that there are similarities and that they show somewhat the same tendencies under similar conditions.

There are several reasons why the producers, even in the same field, do not have costs that are uniform. Some have begun with better resources of land, labor, and capital than have others. There are those that have expanded production further in the direction of increasing or decreasing costs than have their competi-

tors. The productive organizations of some are under the control of better managers and are better organized and systemized than those of others. There are some concerns which enjoy peculiar advantages in their relation to the market in which their goods are sold, or which have been given some special privilege which enables them to operate at costs lower than others in similar undertakings. Even when the forces which ordinarily lead to the elimination of the least favored enterprises have had their full effect, innumerable points of difference remain in the several productive establishments, and in the circumstances under which they produce, that mean a dissimilarity in costs.

VI

THE ADMINISTRATION OF PRODUCTION

Administrative aims and general method. The economy of natural resources. The increase, conservation, and specialization of capital. The administration of human resources. The adjustment of the economic system. Management of the individual enterprise. Scientific management. Records of business practice. The books and accounts. The principal statements. Cost keeping.

THE several elements out of which a successful productive organization is created and the costs which are to figure largely in the conduct of the productive processes have been discussed in the preceding chapters with the assumption always in mind that there was to be an intelligent administration to create the organization and direct its activities. The processes of production are not automatic, and their character and ultimate effectiveness depend upon the quality of their administrative direction.

ADMINISTRATIVE AIMS AND GENERAL METHOD

The goal of productive activity is, of course, the satisfaction of existing wants; but that is not the entire objective of enterprise as we must view the matter now. Even the savages have their wants and satisfy them. Uncivilized people are content, however, with the most elemental utilities, and their needs and desires go scarcely beyond the requirements of mere animal existence. Civilization consists in the development of intellectual and spiritual desires and in the refinement of physical wants. Such development and refinement is at once the cause and the result of economic progress. Production responds to growing demands with new and richer satisfactions and with greater stores of goods. This, in turn, creates the opportunity for further humanization and results in the expansion of desire. It is for the latter reason that the general well-being of the race depends in part upon growth in economic life and, specifically, upon the increase of production, as well as upon numerous other causes. The increase of wealth permits the shortening of working hours and makes leisure possible. With leisure

may come a diversion of interest from the struggle to maintain life and supply necessities to the cultivation of personal graces and talents and to the development of fine arts and richer social intercourse. The increase of production and the improvement of the means of satisfying wants, as well as the immediate creation of utility, therefore, are the business of productive administration.

The administration of production embraces all that may be done to control and increase production, from the regulation of the details of its minor operations to the direction of great social movements. It includes all those matters which are for private decision and those matters, as well, which are for social determination. In giving attention to the specific task of controlling production, a well-ordered administration takes account of three phases of productive causation. It begins by attending to the quality of the factors of production and to the increase of their quantity. In the second place, it adds to their effectiveness by combining and organizing them and by exercising intelligent control over them. Administration undertakes, in the third place, to eliminate unnecessary costs and to devise ways of decreasing all costs. The manager is charged especially with the protection of the factors of production against the many destructive forces which hamper them and destroy their productivity.

Productive administration lies in the hands of three factors of control, or we may say, rather, that the administration of production is influenced from three directions. Administrative policies and decisions are determined, not only by the enterpriser himself, who may be regarded as the primary element of control, but also, secondly, by every member of his productive personnel who in any capacity exercises discretion and, in the third place, by organized society through its government. In a sense, all economic causes affect the nature and direction of productive activity; but we are concerned now only with its deliberate and at least nominally intelligent control. Choices are made only by persons, and contributions to administration come only from the people who are charged with, or vitally interested in, the conduct of production.

The power and importance of the enterpriser in matters of business administration is obvious. But the members of the organization which the enterpriser creates, likewise, are factors both in the management of particular enterprises and in administration in the broadest sense. The manager, the superintendents, every one

of the subordinate officers, and even many a workman who holds no position of authority may be charged with the exercise of discretion in the daily conduct of production and have the power, not only to contribute to the perfection of business practices, but also to give new direction to productive activity. Society affects productivity indirectly, as one of the general causes in economic life, through great popular movements and in many other ways. Through the agency of the government, society establishes as a matter of direct administration the very forms of business association among which the enterpriser must choose, fosters one enterprise, and puts limitations upon another.

While the administration of production is thus a joint affair, subject to determination by more than one factor, there are certain things which are left more largely to the control of society and certain others which it is agreed belong peculiarly to the manager. The manager holds the pivotal position in administration, and the forces of control are all largely concentrated and given direction by him. Nevertheless, some matters of administration are especially his affair, and some more largely than others are the affair of society as a whole.

In the following discussion, we shall take note first of the broader or major issues of administrative policy which are of especial interest to society as a whole, consider secondly the specific functions of the business manager himself, and conclude with a description of one of the salient features of business practice, namely, the keeping of business records as an aid to management, a matter very largely in the hands of subordinate members of the personnel. The treatment of business records has been introduced for a second reason also, that it embodies a very important part of the very language of business and introduces certain concepts which may be used to advantage in the study of the general subject of economics.

THE ECONOMY OF NATURAL RESOURCES

Possibly the greatest historic achievement in production was accomplished following the discovery of America by the development of certain natural resources which, until comparatively recent times, had lain practically idle. For centuries a considerable part of the human race had lived in a state of poverty, or what

would seem to be a state of poverty when compared with the circumstances of the people of the United States today. The crowded populations of Oriental lands, even in recent years, have been subjected to recurring disastrous famines; yet but little of the surface of the earth had been occupied before the discovery of America, and only an insignificant fraction of its actual annual product, to say nothing of its permanent resources, had been devoted to any use. Even at the present time, we have only begun the development of some of the richest resources of the world, and certain practically unoccupied districts of North and South America, and of Asia, Australia, and Africa, are superior in productivity to some of the most densely populated regions of the earth.

Geographic obstacles are a hindrance to the development of many areas of the earth's surface. These obstacles are of less consequence today than they were in times past, but it is only recently that the means of overcoming the barriers of ocean and mountain have been made available to the great masses of the people in unfavored localities. It is still more recently that we have attained such a mastery of climate that we may expect to extend civilization to the supposedly unhealthy regions of the tropics. It may still be inadvisable to attempt the colonization of certain parts of the earth, for it may be found to be entirely too costly. Nevertheless, the development of the resources of all regions is to be undertaken as rapidly as it proves economical to do so, either by colonization, by the education of native people, or by the introduction of temporary labor and management to be withdrawn from time to time as may be necessary for its own preservation.

It is a question whether distant neglected resources offer more immediate returns than those at hand which are now underdeveloped and thus, in a sense, wasted. There are few parts of the settled lands of the earth which are utilized to the full extent consistent with, and required by, economy. Recently, the intensification of production in semiarid regions has been undertaken by dry-farming methods and by the use of plants native to dry countries or artificially adapted to the conditions found there. Unused lands of great fertility have been opened to production by means of irrigation. There are marsh and swamp lands yet to be rendered available for agriculture by artificial surface or subsoil drainage, or to be drawn upon for their natural products when set apart as game preserves or for similar purposes. Rough and in-

fertile hills are to be given over to forest cultivation; farms, worn out by careless use or abandoned because of thin and rocky soil, are to be specialized to new uses and made productive by scientific management. Such lands are now being converted into dairy and orchard farms. The general intensification of all agriculture in countries like the United States opens possibilities beyond present calculation. The lakes, the rivers, and the sea may also be expected to disclose new resources of food and power and may be utilized in new ways in the process of production.

The prospect for the occupancy of new lands suggests the probability of the discovery of new materials there. We have the opportunity also of putting well-known materials to new uses. We have found great natural resources of rubber, have learned the possibilities of its use, and, for the sake of greater supply, have turned to the cultivation of plants which yield the essential element of rubber. Recently, new metals have been made available for use in production and consumption. Petroleum is a comparatively new commodity. There have been noteworthy achievements in the enrichment of the food supply by the discovery of new fruits and better grains and vegetables than the western countries have been accustomed to cultivate. Innumerable substances not formerly in use have been prepared recently for medicinal purposes. There are new building materials and new fibers for use in the manufacture of textiles. Private and governmental agencies are now engaged in bringing the commodities of every land to the attention of the people of other lands and, by the aid of the natural sciences, are undertaking the examination and analysis of almost every product of nature to discover qualities that might render these things useful or, if they are already in use, more useful in the satisfaction of wants.

The productive organization of society as a whole is under the same necessity of making provision for the careful maintenance of its resources as is the individual manager. As new lands are depleted and natural resources exhausted, the people are faced with the consequences of permanently diminished productive power. The consequences are particularly serious when there is failure properly to conserve the mineral and forest resources, which either may not be renewed at all or may be recreated only by very slow steps and after the lapse of considerable time. The utilization of the natural resources is an economy, as has been suggested above.

Yet it is possible for people to destroy them in the process of utilization and to be entirely deprived of them within a single generation. The best management will find ways of utilizing, while at the time preserving, all our resources, and where the complete preservation of the resources is impossible, it will at least conserve them against wasteful use. There can be no invention of such far-reaching or long-continuing benefit to the general welfare as the devising of means to perpetuate and replenish the natural resources.

THE INCREASE, CONSERVATION, AND SPECIALIZATION OF CAPITAL

It is a desirable achievement of administration to bring nature more fully to the aid of man in the ways discussed in the topic above. We accomplish somewhat the same result in an indirect way, however, when we create capital. If nature were to provide more freely than it does, capital would be less important in productive activity. But, as we are compelled to resort to raw materials which are not readily adapted to use and as our desires lead us to attempt to contrive a wider variety of commodities from the things which nature yields, we find it a matter of practical necessity to make use of artificial means of increasing our productive power. We have only the alternative of the use of capital together with labor and land, or production by means of labor unaided except by natural forces.

The effectiveness of capital in productive processes is a thing so universally recognized as hardly to need to be affirmed in this discussion. No one supposes such a state of economic development as that which we have attained at the present time to be possible without the aid of this productive factor. The advantages and importance of the increase of capital as a means of further improvement also are taken for granted by everyone. But the alternative in methods of production which we have mentioned is of more significance than may appear upon first thought. We think often of the matter of the increase of capital as though such increase were simply to keep pace with the increase of labor and as though we were to continue using the two factors in the same proportions as of old. We have made progress in the past, however, by increasing the ratio of capital to labor, and our development in the future is to be in the direction of a substitution of capital for labor.

If, in order to make use of a greater number of laborers, we increase the numbers of our population, we increase the need for goods at the same time that we increase the supply. If we put each laborer among those now existing to greater exertion and longer hours as a means of gaining our greater satisfactions, we gain them at a constantly increasing cost. It is desirable, therefore, to make a greater use of capital in preference to labor, if possible, so that there may be, not only an absolute increase of goods, but also larger shares for personal distribution without excessive cost to the members of the economic personnel. It becomes constantly more easy to accomplish the stated result. As wealth accumulates and income increases, it costs less to forego consumption and to save for further production. We have the possibility of an expansion in production in the future, therefore, at an absolute decrease of cost so far as capital is concerned.

It goes without saying that the conservation of capital is an essential element of good administration; but the problem of conservation is much greater than it sometimes appears to the individual manager. By the device of insurance, the manager is able to protect himself against at least a part of the consequences of the losses occasioned by fire, windstorm, explosions, and certain other causes of property damage. But no insurance against the causes of the disintegration and destruction of capital can restore it to productive effectiveness. A building burned is not restored to production when it is replaced at the expense of an insurance company. The loss, taken in itself, is a final loss. The burden of bearing it may be shifted or distributed; but when the structure has been replaced, it will be found that the cost of two buildings has been expended and there is only one building for use. The wrecking and sinking of a ship occasions a final loss. An engine demolished or put out of action is capital destroyed. The cost of creating the capital has been expended to some extent in vain. This is a matter requiring more general administrative attention than has yet been given it.

Production depends also upon the satisfactory specialization of capital. Such specialization is to be accomplished in part by administrative decision and in part by technical invention. Administration is at fault when specialized capital is devoted to uses which are too temporary to justify the specialization. Capital must occasionally be given to undertakings which are to be of

short duration, but, to justify an investment, the temporary enterprise must be of such importance as to make possible an economical use of, and an adequate return upon, the investment. It is often necessary to construct special equipment for the purposes of a single building operation alone. Machinery is created, without avoidable error on the part of management, for the manufacture of goods for which there turns out to be only a very temporary or insignificant demand. On the other hand, capital is sometimes created in the form of buildings without proper care to insure their adaptability to the many uses, or the particular use, to which they are to be devoted through their long existence. These are points which only suggest the manager's part in the specialization of capital.

Technical invention has proceeded so rapidly in recent years that it seems no further striking achievements can be expected in the adaptation of goods to the producer's needs. The process of the specialization of capital can by no means be said to have been completed, however, until machinery has been provided to relieve production entirely of the necessity for the drudgery of unskilled manual labor. Developments which may have that consequence are not beyond hope of realization. So much has been accomplished in the recent past that one may easily project his thought forward into the time when the simple application of the physical power of man will not be required in economic activity, and labor will be, as it should be, chiefly the exercise of mental power. Physical activity for the human being is to become only a satisfaction and in no case a burden. This is to be the outcome of the highest utilization of capital.

THE ADMINISTRATION OF HUMAN RESOURCES

The greatest possible income and resultant satisfaction is to be obtained only by the utilization of every resource of labor and management. The community, in the administration of its productive activity, may arrange, possibly, that some shall labor and others engage only in consumption. But if the people make such a decision, they will need to be content with less in the way of goods and services than they might obtain by general employment. The consequences of such a plan may not affect all individuals alike, but the results, taken as a whole, are unmistakable. The well-be-

ing of every person is affected and determined in part by the presence of consumers who voluntarily or otherwise retire from participation in production before contributing their proportionate shares of the service upon which society must depend for the creation of goods for the satisfaction of wants. Paupers, the loafers of the little village and the city club, the tramps, the idle rich, both male and female, and the criminal and antisocial elements of the slum produce nothing and yet make use of goods produced by others. Even those temporarily unemployed and those who might contribute their services free in the higher ranges of productive administration, by having no part in production, limit by that much the possibilities of economic advancement. Barren and wasted resources of this sort are a cause of loss to the many as well as to the few most directly concerned.

Full utilization and the conservation of human resources are closely related. Unemployment is to a large extent the result of the deterioration of health and physical condition. The major chronic parasitic and constitutional diseases are a cause both of idleness and of the ultimate destruction of the individual affected. Epidemics, also, which close the shop, store, and school are destructive of our very resources. The seemingly trivial afflictions which break down the effectiveness of labor for a time and accidents which have a similar result, are not always of temporary consequence only. The mortality of infants is a disaster from other than economic points of view, but we may include it together with the thousands of avoidable deaths as a wastage of economic resources.

In general, all the forces which destroy the population are a cause of economic loss. Similarly, vice makes parasites and destroys the will and the power to work. It leads to mental and physical stagnation and deterioration. Those who dissipate, as the word "dissipate" indicates, are those who scatter their powers. The result is economic, as well as other, loss. It is the business of administration to bring to bear every protective device known to economics, the natural sciences, psychology, and sociology for the correction of these cumulative causes of costs. Enlightened economy is engaged now in the study of the laws of fatigue and the adjustment of working and recreational hours in order that, by normal living, a proper measure of concentration, and a measure of diversion, physical and mental vigor may be maintained and even

augmented. The contributions to that result from other than economic fields of endeavor are many and valuable.

We are now beginning to account, also, for the costs of labor maintenance in production itself and to assign the costs as burdens to the enterprises to which they pertain. These costs were always borne by industry in a remote or indirect way. Now, they are coming to be assumed by management as a direct charge against the product created. This development has been accomplished in part by law. Factories have been required to take precautions against accidents and industrial diseases. The hours and conditions under which women and children may be employed are the subjects of regulatory statute. Attention is being given to the education and physical development of employees. The enforcement of employer's liability and workmen's compensation acts results in the costs of specific injuries to workmen being transferred to the industries in which they occur and in their being met in the same way that other costs are met. To some extent, by law and otherwise, the wages paid to laborers have come more nearly than formerly to cover such items of personal maintenance as are necessarily to be attended to by the workman himself.

Human resources require, also, to be constantly improved and specialized. We are concerned, in this connection, in economic affairs principally with the improvement of the intellectual powers of the producer. Every human being is to be prepared for some part in productive activity and so developed that he may contribute his best to economic progress. The improvement and specialization of the economic personnel is one of the tasks of education and technical training. The application of education to this phase of administration begins with the discovery of the aptitudes and talents of those who are to be producers. Its second task is the preparation of the individual for a proper part in economic activity and for a place in the productive organization. Education has for one of its objects, therefore, the discovery of genius and exceptional talent; but it has also the duty of discovering the particular specialization of which each individual is capable. Capacity may be discovered in the individual either before or during or at the conclusion of his educational preparation. Education, in the broadest sense, continues through life, and there is no time when the endeavor to discover talent should be concluded. It is quite possible that, by too great attention to the obviously capable or by

a lack of persistence in this particular phase of administration, rare ability may be allowed to escape development and be lost to production. Let genius appear when it may (we can not prospect too widely for it), all the productive ability which may possibly be available is to be drawn upon and led out both by teachers and managers and by the individual himself as a matter of early and continual development.

THE ADJUSTMENT OF THE ECONOMIC SYSTEM

Since the productive factors do not work independently, their selection and care does not complete the task of administration. There remains the necessity for that division of labor and diversification of activities which is basic to economic organization and management. There is the question also of the proper adjustment of our forms of association, by law or otherwise, to changing economic conditions in such fashion that managers, capitalists, and laborers may always be assembled as required in any undertaking. Production is to be so administered that land, labor, and capital shall be allotted in proper proportions to various enterprises, and each unit given its proper assignment. As conditions change, transfers must be effected so that no productive factor shall be used in any place where it will yield less than it might if employed elsewhere. There is a need, furthermore, for such study and comparison of the methods of management that there may be devised the very best possible systems of operation. Such attention to management may be expected to lead to a better handling of physical materials and equipment, to the development of efficiency in managers and workmen, and to the promotion of harmony among the interests that occasionally conflict. The various institutions of society which contribute to productivity are to be studied and from time to time reorganized as economy dictates. The foregoing is a very brief and necessarily incomplete statement of a matter which we shall be in a better position to discuss at length when we have completed the study of the entire economic system.

MANAGEMENT OF THE INDIVIDUAL ENTERPRISE

So far, only the more general aspects of administration have been reviewed. The specific application of the principles enu-

merated, while controlled in part by society and by law, is largely the task of the business manager. The people in general are concerned with the fundamental issues of administration which have now been outlined. The enterpriser and the manager have to deal with immediate and concrete situations. The community, which controls through law or by less formal control, is only intermittently active in management. The manager, who operates continuously, bears the great burden of routine adjustments.

The proprietors and the higher officers who constitute the management of a productive unit have the power to formulate policies, create the subordinate organization, and direct the business operations. The various functions which we find to belong properly to the management may be borne by its several elements collectively or be centered upon a president or manager alone. The management's part in the administration of production is the same in either case, and we may ignore hereafter all peculiarities of internal organization.

A far-reaching decision of the management of a given enterprise has to do with the determination of the very nature and scope of the undertaking. Thus, with an opportunity at hand to engage in merchandising, the enterpriser must determine whether to undertake both wholesaling and retailing or one or the other alone and also how great a market he will attempt to serve. The decision depends, generally, in the first place, upon the true character of the business opportunity which is supposed to exist and upon an analysis of the entire situation into which the projected concern may be introduced. From time to time, the character and scope of the undertaking is to be reviewed, particularly when it is necessary to adjust the productive organization and its activities to developments in a changing community. The business may need to be diverted to an entirely new venture, or it may need to be combined with other concerns, or even, to avoid loss, be closed out entirely.

The management is responsible for providing the concern with adequate funds and attends to their investment in plant and equipment. It selects the business location and arranges for a complement of officers, superintendents, foremen, and workmen, or a personnel of another sort, as the size and nature of the business may require. With the management rests the responsibility for creating departments and adjusting their relations with each other. It is necessary to decide how the various activities of the business are

to be coordinated or subordinated and to what departments many miscellaneous activities are to be assigned. The problem of any one of the departments may, therefore, at some time or other become the problem of the whole concern.

The concern as a whole, and each of its departments in some cases, must be regulated by a plan or system of operation which sets forth the regular order of procedure. Policies must be formulated for the control and reward of employees and for the utilization, care, and maintenance of equipment. The external relations of the concern also are to be conducted either by the management itself or in accordance with policies which it lays down. Contracts of great importance are negotiated by the principal officers themselves, and relations with investors and with the government require their direct supervision. Relations with labor organizations and with the public in general are also matters for the attention of the management.

The subordinate elements of the organization exist to carry the various policies of the concern into effect and to conduct the routine work of production. They are employed for their particular fitness for this service, and if the concern is properly administered, they will have opportunity for the exercise of their talents and individual powers. They are assisted, of course, by orders and instructions prepared for their use. Orders may be carried to the point of overregulation and become a hindrance and a restriction to production. Administration has always, therefore, the problem of self-limitation.

SCIENTIFIC MANAGEMENT

The success of administrative policies cannot be so accurately measured as can the results of physical experiments. The manager often finds himself, therefore, in great uncertainty as to the proper course of action to take in solving ordinary problems. Economic development in recent years has been so rapid, furthermore, that the manager could scarcely accumulate experience of such duration as to be conclusive in matters of administration. The manager is confronted today with situations which are new to the present generation itself and without historic precedent.

The manager is handicapped as well by the very individualistic character of the social system. In the era which has just come to

a close, this individualism was carried to such lengths that there was practically no intercommunication of experience among business men. Managers relied upon themselves alone and held sacredly private all the results of their productive policies. Under such circumstances, men learned business by rote and had little opportunity to investigate the operation of economic law. Training was entirely by apprenticeship, and beginners were drilled in the practices of unsuccessful as well as successful concerns. They had little opportunity to distinguish good frrom bad practice in the fixed routine of a business conducted under traditional precepts. Neither outsider nor insider was able to collect the records of numerous similar undertakings in order that comparisons might be made and reliable conclusions drawn. Even experiment was risky, and it was largely unnecessary where opportunity yielded great rewards, often in spite of the poorest economy, as it did in America a generation ago. Business methods which were initiated without reason and handed down from generation to generation are an inheritance that has proven worthless in the complicated conditions under which modern business operates. The earlier methods were wasteful under the most favorable circumstances; they are inconsistent with good management today.

The new requirements of production have given rise to a scientific attitude toward management. The modern manager engages in the study of the sources of economic knowledge, which, incidentally, are coming to be adequate and even abundant. His task is one of informing himself upon economic conditions in general and upon the exact facts as to his own business enterprise and the conditions affecting its success in particular. He is engaged in experimentation by the process of changing methods and policies from time to time to discover how results may be made to differ. Manufacturers undertake detailed studies of the tasks which are assigned to laborers, of the time required under the most favorable conditions for the completion of the tasks, and of the motions involved in the operations which the laborers perform. The managers make accurate studies of the durability of equipment, and of its efficiency under stress. They test the workman's ability to endure the strain of constant attention and great physical exertion, in order that his task may be so controlled that he may produce the maximum consistent with his own preservation. Scientific management is yielding a new type of supervision which is in-

structive and even educational in method and effect. The scientific manager is constantly engaged in replanning his system of administration and in adjusting his business both internally and externally. He finds it necessary continually to inspect his productive machine and observe the working out of his administrative policies. The manager has come to realize the value and ultimate necessity of adequate records, both of his own concern's affairs and of the developments of the entire productive world. These records allow him access to an accumulation of experience from which the discovery of economic law becomes a possibility. Scientific management is administration based on accurate knowledge.

Scientific method in general is to be distinguished from a certain plan of factory administration known technically as scientific management. The latter was devised originally to meet the special conditions encountered in machine shops. It was inspired by the observation that workmen, tools, and machines were ill-adapted to their tasks and that management was deplorably ineffective. A new scheme provided for the careful planning of operations, for the formulation of standards, and for rather intricate methods of organizing the foremen and paying the workmen. A further discussion of the several special plans for the improvement of factory management is unnecessary here. Suffice it to say that they are at the foundation of the whole recent movement for more scientific methods in the conduct of business.

RECORDS OF BUSINESS PRACTICE

Even the least efficient administration of business requires the keeping of some records, and the customary records are of comparatively long-established use. The purchase and receipt of goods, the sale and shipment of the product, the attendance and performance of workmen, the amount and value of the capital and goods on hand, and the relations of the concern with its debtors and creditors must generally be made matters of record for the sake of knowledge of the legal obligations involved and to enable the manager to determine the state of the firm's affairs. Many concerns keep only a few of these records. In fact, useless reports and accounts are a burden and a cost, and it is very easy to overdo the keeping of accounts. An overelaborated record system is a form of red tape and is, of course, a hindrance rather than a help

to good management. It is altogether probable, however, that most concerns are underdeveloped in some phase or other of the recording of experience if not in the keeping of accounts of their transactions with outsiders.

THE BOOKS AND ACCOUNTS

The records which apparently are most necessary and which are most frequently kept are the so-called books and proprietorship accounts. Their principal purpose is to determine for the use of the owners whether the concern is making a profit or losing; if losing, whether the concern is insolvent or not; and if earning a surplus over costs, what disposition is being made of the surplus. In the second place, they disclose what property in the business the owners possess and, at the same time, what capital the business has, in what form it is held, and to what use it is devoted. To accomplish the purposes stated, the accounts must include, of course, a statement of all relations with outside parties, showing who are debtors and who are creditors. The accounts are especially valuable in establishing rights of ownership at law and in protecting the firm against fraudulent claims and against the dishonest and negligent handling of the income and capital.

In the preparation of the records, a distinction is made between "the business" and its owners. The business is regarded as having separate existence and as dealing with the proprietor as well as with other persons, receiving funds from him and having obligations toward him. The imaginary business unit also keeps the record of its stock of goods, its cash, the claims or bills it must pay, and the bills receivable, as though dealing with persons. Accounts, therefore, are not the records of the affairs of any owner, but rather of an enterprise or an economic unit. Separate accounts may be kept for different undertakings when the business unit and the legal unit are not identical.

The method of bookkeeping is to show all the transactions of the business with outside parties, particularly in case the transactions involve a debt on the part of either, and the effect of each transaction upon the stock of goods, the cash, or other elements which the manager or any officer is expected to observe. There are certain principal books commonly kept for this purpose. The old-fashioned daybook was a complete record of each transaction showing

all the details that might possibly be used at any time. It is the practice now to combine the daybook with the journal. The journal is a book of original entry in which all the items are recorded as they occur and in which they are so arranged as to indicate how they are to appear later in the ledger. An entry in the journal is made in the following form:

March 3, 1926

	John Smith Co.	*750*	*00*		
	Sales			*750*	*00*
	50 bbl. flour @ $15.00				

If a daybook is kept as well as a journal, the explanation of the sale is unnecessary. This simple journal entry shows that John Smith Company owes $750 (debited), and that the firm's income from sales is to be credited with the value of the flour.

It is important to be able to keep track of all the transactions with John Smith Company without sorting through all the journal items. Therefore, the entries in the journal are transferred, or "posted," to a ledger, where an account with each debtor and creditor is kept separately, and where accounts are also created with the stock of merchandise, with cash, and with other impersonal factors which show the income, assets, and liabilities of the firm. In the ledger account, John Smith Company is debited with $750 worth of merchandise and, when cash is given in payment, the John Smith Company is credited with the payment. Thus:

JOHN SMITH COMPANY

Mar.	3	[Mdse.]		750	00	Mar.	23	[Cash]		750	00

From such entries as these, the concern can tell what its relations with John Smith Company are, what merchandise has been bought and sold, and what bills receivable and bills payable, if any, there are to collect or pay.

This brief description of the books reveals very little as to bookkeeping practice, and it is intended only to show what use is made of the records. But, in addition to being used by the various departments in the connections suggested, the accounts are summarized by the accountants, together with certain other records, for the use of the management in determining the matters mentioned at the beginning of this topic. It is the business of the accountant to devise a system of record keeping, in accordance with the needs of the firm in question, that will reveal the true state of the concern's affairs. The accounts must provide more than a mere history of transactions. Depreciation and every sort of loss and gain must be recorded. Expenditures must be charged to the proper account, and profits must be correctly calculated. The accountant may audit the books to see that the records have been kept without error, and he may prepare the principal summary statements. The two principal statements which are used by most concerns are the income account, or revenue statement, and the capital account, or balance sheet.

THE PRINCIPAL STATEMENTS

The revenue statement, called also the profit and loss statement, is a summary of income and expenses for a given period of time, so compiled as to show the sources of gain and the various costs that were met. The statement reveals the profits, if any, and consequently the success or failure of the business during a given period. The form of the statement is suggested by the following outline which is constructed with an electric light and power company in mind:

Operating Income:		
Sales of current	$300,000	
Sales of power	250,000	
Miscellaneous earnings	50,000	$600,000
Operating Expenses:		
Production costs (including maintenance)	$400,000	
Administrative and selling costs	50,000	450,000
Net Earnings		$150,000
Non-Operating Income		10,000
Net Income for the Year		$160,000

Deductions From Income (Fixed Charges):		
Taxes, etc.	$ 5,000	
Interest on debt	30,000	35,000
Net Profit for the Year		$125,000
Appropriations for Various Reserves		35,000
Net Profits Available for Dividends		$ 90,000
Dividends Declared		40,000
Net Profits Transferred to Surplus		$ 50,000

The balance sheet is a statement of the resources, or assets, on the one hand, and all the claims or liabilities against the assets, on the other. Everything which constitutes capital or which is a source of income to the concern is listed as an asset. On the liability side of the account are entered the claims of all creditors, of the owners or stockholders, and of every special need against which the business holds some resources.

ASSETS	
Real Estate and Buildings	$ 500,000
Machinery and other Equipment	600,000
Stocks and Bonds of other Companies	50,000
Notes and Bills Receivable	85,000
Cash	15,000
Total Assets	$1,250,000

LIABILITIES	
Capital Stock	$ 650,000
Funded Debt (Bonds)	300,000
Current Liabilities (Bills and Notes Payable)	40,000
Depreciation Reserve	80,000
Other Special Reserves	70,000
Surplus	110,000
Total Liabilities	$1,250,000

This account indicates that the concern is solvent and that the owners have an investment of $110,000 over and above their original stock contribution and above all debts and special needs of the business.

COST KEEPING

Cost accounting is concerned with the collection of all the items of cost which may be involved in the production of any unit of

commodity or service. The cost accountant begins by calculating the cost of the labor and materials used directly in producing the unit of commodity in question. The facts may be ascertained from records. His problem then is to divide the general and miscellaneous expenses among the various products and units of product. The problem is not so much a matter of record keeping, though very detailed records must be kept, as it is a matter of judgment and expertness in spreading the joint costs.

Cost keeping, or "costing" as it is now sometimes called, is not concerned with the relation of the business either to the proprietors or to other persons or with the source and destination of the receipts and disbursements. It is the instrument, rather, of the superintendent of the productive operations, enabling him to estimate the cost necessary to any specific act of production, to ascertain which parts of the process are costing too much, and to effect improvements accordingly. Cost keeping provides a test of efficiency to be applied at every step in the productive process and reveals as much with regard to administrative success as do the general accounts. However, cost accounting deals with concrete elements in specific undertakings only, and it is not always applicable to every phase of the productive activity, even of the individual enterprise.

ECONOMICS

PRINCIPLES AND INTERPRETATION

PART II

CONSUMPTION

VII

THE NATURE OF CONSUMPTION

Consumption and the productive utilization of goods. Consumer's organization. Economical and uneconomical consumption. Harmful consumption. The measurement of wants and satisfactions. The choice of satisfactions. The satiability of wants. Present and future satisfactions. Consumption and cost. The counteracting effect of alternatives. Luxury. Recapitulation.

THE second of the two primary economic activities is consumption. By this term we mean simply the utilization of goods and services in the final satisfaction of wants. Production and consumption are, of course, interrelated. Each to some extent controls the other and is controlled by it. Production is purposeless and futile unless it conforms to the wishes of the consumer. Consumption is impossible without the activity of the producer. We find production responding to the desires of those who are to use the goods it creates, and the consumer accommodating himself to the actual results of the productive processes. Occasionally the consumer suggests new enterprises and, in a sense, he initiates all production. On the other hand, the producer often creates goods in advance of a known want and undertakes to stimulate new desires. Neither activity, therefore, may be said to be the one primary activity, and both are means to the final satisfaction of wants.

It would be better, no doubt, to designate the activity under consideration as utilization. The word "consumption" suggests destruction, and many consumer's goods are not destroyed by use. Handsomely bound books, paintings, and other works of art which are used for purposes of decoration yield satisfaction without the slightest impairment of their durability. All such things deteriorate with time, but they are not literally consumed. Shade trees about a residence, though a source of satisfaction, cannot be said to be consumed by those whom they delight and protect. The services of professional men, such as ministers of the gospel, are not destroyed when used. To some extent they are perpetuated by utilization; and the power of rendering service, in the case of

many producers, may even be increased by the exercise of that power. On the other hand, food and fuel are literally consumed, and a great number of commodities of ordinary use, such as clothing, vehicles, and certain less durable goods, yield ultimately in the same way to utilization. It is because the word "consumption" has the sanction of long usage that it continues an indispensable word in our vocabulary and must be employed even though requiring this explanation.

CONSUMPTION AND THE PRODUCTIVE UTILIZATION OF GOODS

When goods are put to productive rather than consumptive uses, they may not be said to have yielded satisfaction to the consumer, and they are not consumed, therefore, in the technical sense in which we are to use the word consumption. They serve a need of the producer, of course, and play an important part in the process he is conducting. The producer may be said to have a desire for them, and the physical consequence to the goods may be very much the same as though they were being made to satisfy the want of a consumer. However, it is only when goods and services are applied directly to the satisfaction of the wants which it is the end of economic activity to satisfy that they are to be regarded as consumed.

It is through the idea that consumption is the physical destruction of goods that people have been led to confuse productive utilization with consumption. Some speak of productive utilization as indirect consumption or as intermediate consumption, distinguishing it from consumption proper or final consumption. But the effect of utilization upon the goods is of no real significance to those who are analyzing this matter from an economic standpoint. Consumption and production are two distinct processes, even though they sometimes involve operations which are much the same and which have some results that are alike. The application of all forms of capital to the creation of utility is a part of the process of production. It should not be called consumption, indirect or otherwise. The utilization of goods in the ultimate satisfaction of wants is the process of consumption. The two processes are to be distinguished, therefore, by their economic consequences. The one has a part in the creation of utilities; the other is the application of utilities to their intended purpose.

It may still be urged, however, that the satisfaction of the wants of a laborer plays its part in turn in the production of goods. The effect of the laborer's consumption of goods is similar, therefore, to the use of repairs on machines. However, if we continue around the circle, we come to the place where nothing is consumption, but, instead, all utilization is a part of the activity of creating more utility. Food and clothing and all the goods and services we enjoy come then to be regarded as capital applied to the further increase of things of the same sort. The error comes from dissecting productive causation too finely. The use of labor and the prior use of goods by the laborer are widely separated in nature and even in time. The people are practically all laborers, of course, but the satisfaction of their wants is the end of economic activity. The incidental fact that goods which yield satisfactions preserve the people for further productive activity is not enough to justify one in regarding production as the end, rather than the means, and consumption as a part of the productive process itself. We return, therefore, to the position that there is only one use for the word "consumption" and that there is no real occasion for the confusion of the satisfaction of wants with the application of capital to production.

CONSUMER'S ORGANIZATION

Though the satisfactory administration of consumption is not always easy of accomplishment, the process of utilization itself, from an economic standpoint, is comparatively simple. From other standpoints, also, the same is true. There is no requirement of several factors, or agents, of utilization to be developed, specialized, and diversified before consumption may take place. There is no necessity for an elaborate subdivision of functions. There is little skill or supervision to be applied in the process under consideration. As a consequence, there is no need for an enterpriser or a manager separate from the several consumers themselves. It is for this reason that there is no organization of consumption that can compare in extent with the productive organization and that to a very high degree each consumer is a complete unit in consumptive activity.

While we can find no economic reason why consumption should have elaborate organization, it is a fact of our social life that the

family, to a large extent, controls and administers the consumptive activity of its members. It provides, not only the goods which are to be used by the members jointly, such as the house and its furnishings, but also in part the food, clothing, and personal effects of the individuals concerned. This fact gives the home and the household a place of considerable importance in consumption and makes practically impossible the drawing of a line between those principles of management in this connection which have been developed for the individual alone and those which govern household practice. It would be reasonable to expect the two sets of principles to be much the same, and in the treatment of the administration of consumption, it is in fact unnecessary to distinguish between them.

To a very limited extent, there is organization of the consumers in the buying phase of their activity. Consumers' cooperative societies, to which reference has already been made, have been created to make purchases in the interest of consumers alone. These societies make it unnecessary for the consumer to depend entirely upon the commercial organization established by the producers. If the societies are truly cooperative and completely so, they do not engage in the general retailing of commodities and do not act as agents of the consuming public in general nor of any producing concern. Their sole purpose is to maintain a store of goods for their own members. They make no profits from their operations as a producer would expect to do, but buy as economically as possible in order to enable the several cooperators to secure more satisfactory goods or to effect a saving in their purchases. In this way, consumers are able to obtain goods and services at a lower cost than is generally possible when other methods are used. The gains of cooperative purchasing are distributed to the cooperators either directly or by means of patronage dividends, which are periodic rebates given upon the basis of the amount of goods purchased.

While cooperative purchasing organizations do not dominate the market, they are by no means so unimportant as properly to be dismissed from mind with a passing thought. The cooperative movement began with the founding of the Rochdale Pioneer Society in England in 1844, and cooperation has endured long enough and succeeded sufficiently to warrant the belief that it is to be an increasingly important feature of economic life in the future.

Consumers' societies in the United States today number nearly 200,000 and do a business averaging probably over $100,000 yearly per society.

Nevertheless, consumers' organizations are relatively unimportant when considered quantitatively, and our attention is to be given chiefly to the study of the consumer's personal administration of his own activity and not to the study of the management of a supporting and contributing machinery of consumption.

ECONOMICAL AND UNECONOMICAL CONSUMPTION

The consumer has the choice of several general policies in consumption. These policies permit, however, of only four principal variations. Two of these are economical, and two are definitely uneconomical. Parsimony is the restriction of consumption too closely and unnecessarily. Extravagance, at the other extreme, is consumption carried to an excessive degree, more goods being consumed than the results in satisfaction warrant. Both policies may involve the utilization of either great quantities or small ones. Though only the rich may be prodigal, the poor may be extravagant. On the other hand, both rich and poor may needlessly deny themselves. The intermediate alternatives to the two policies mentioned are frugality and the use of goods in profusion. Both are economical. Frugality is the limitation of consumption only so far as circumstances require, and in order to serve some economic purpose. The consumption of goods freely and in great quantities may be in accordance with the best principles of administration and there may be cases in which it is greatly to be desired.

The parsimonious consumer refuses to take and enjoy that which is available for his use and which is not required for other purposes, including among such purposes, of course, consumption in the future. His attitude may be due to a misconception of duty, to a misunderstanding of his needs, or to habits of self-denial which were acquired in youth and which are not easily escaped. The personal excuse made for parsimony is often that the consumer is poor. But where there is real poverty, a close limitation of expenditures is not to be regarded as parsimony. Furthermore, those that refuse to produce can hardly be said to be actuated by the same causes and motives as are the parsimonious.

The man who will not work is generally quite a different person from the one who earns but will not spend what he earns.

The policy in question involves economic loss to the individual or to the community accepting it. It is negation of the idea that satisfaction is the end of economic activity. Occasionally, some one insists that the parsimonious enjoy their deprivation and love misery. There may be those, of course, in whom parsimony is the expression of a mental peculiarity or aberration. But most sound and normal minds recognize the true purpose of production and that one who has engaged in productive activity and refuses to enjoy the reward of such activity renders futile and inexplicable his whole expenditure of costs.

Extravagance, on the other hand, is the consumption of goods in quantities which are out of proportion to the gain received from the act of consumption, or, rather, the consumption of goods beyond the possibility of receiving gain. Extravagance involves a direct waste and loss of goods, as does parsimony. As a result of either policy, certain expenditures of the consumer are uncompensated. The immediate loss from parsimony is in satisfaction foregone. In the case of extravagance, it is in utilities rendered ineffective and possibly destroyed. The economic balance between gain and loss is much the same quantitatively whichever of these policies is adopted, though the consequences to the individual are very different.

Extravagance may result in the careless handling of goods, as so frequently occurs in the consumption of food. It leads to the attempt to use great quantities of goods the benefits of all of which the consumer is in no position to receive. Extravagance brings about the purchase of costly commodities which do not serve a genuine want and those which meet so transient and feeble a desire that the requirement for them passes before they are consumed. Spendthrifts are people who indulge themselves thus. Often they are people who have not produced the equivalent of that which they consume or, having produced it, do not fully comprehend its utility.

The economic use of goods is that use which affords the greatest possible satisfaction. If production is low, frugality may become the only satisfactory, and even an absolutely necessary, policy. In other cases, frugality may be incident to saving for later needs or to saving for the creation of capital. Profusion in the use of

goods is to be approved when supplies are adequate and the immediate requirements of the consumer are not outweighed in importance by other considerations. It is sufficient to meet the requirements of economy that wants are satisfied in the course of time to the maximum permitted by consumptive resources, and without waste. How conformity with this principle is developed in practice requires our further attention.

HARMFUL CONSUMPTION

In one sense, all uneconomical consumption is harmful; but there is occasion for the use of the term "harmful" in connection with consumption which is more directly and positively injurious than simple parsimony or extravagance can possibly be. The utilization of goods under certain circumstances may have consequences that are destructive of the productive and consumptive personnel as such and that tend to make economic activity difficult or even impossible. The consequences of harmful consumption are not always related to their actual cause by those upon whom they fall. Sometimes they are willfully ignored. In many cases, the consumer is lacking in the power necessary to control and prevent them.

The test of the harmful utilization of goods and services lies in its economic effects. Consumption which shortens life, impairs productive power, entails pain or misery, dulls sensibility, debases taste, or renders repulsive the things of life which to most people are its charm is uneconomical, no matter how imperative it may appear to be or how pleasing its immediate aspect. Persistence in uneconomical consumption is called vice. It is generally regarded as an affliction to the community as well as an injury to the individual.

We are not concerned here with the ethical implications of this matter, that is to say, with the question of one's duty to his fellow men. We are thinking simply of the balancing of loss and gain to the individual consumer and, incidentally, to the entire body of consumers considered collectively. But the community renders judgment on consumption of all sorts and puts the stamp of its disapproval on that which is harmful. Economic and moral principles often come thus to coincide, and we need not take pains to distinguish the two. There are few so firmly grounded in the

knowledge of the principles of consumption, furthermore, that they have no occasion at all to take account of the experience of others and consider the common judgment in matters of policy.

THE MEASUREMENT OF WANTS AND SATISFACTIONS

Wants arise within the mind and are peculiarly individual. It is generally impossible, therefore, to compare accurately the intensity of the wants of one person with those of another. There is often much external evidence to show that the wants of other people are strong or slight, and such wants may be estimated to be either greater or less than our own. Yet one cannot enter completely into the state of mind of another and cannot accurately determine the intensity of the latter's wants. For that reason, we do not attempt to measure our wants in ratio to the wants of any other person. The importance of one's wants may not be calculated, furthermore, in terms of something of an entirely different nature. Thus, one accomplishes nothing by comparing his wants with things of physical weight or density. Wants and physical things, being of a different order, are not commensurate. We cannot express the importance of our wants, consequently, in any such units of measurement. There remains only the possibility of measuring wants by comparing the intensity of one with that of another in the mind of the same person. In practice, one measures his wants by arranging them in the order of their importance to himself. A certain want is said to be either more or less important than another; and thus a ratio between the two is established. Since the satisfactions to be gained by the consumer are great when the want is great and slight when there is little desire, the measurement of the want is equivalent to the measurement of the desired satisfaction.

THE CHOICE OF SATISFACTIONS

The consumer is compelled to undertake the measurements of wants in practical consumption partly because he is limited in his resources of goods and services and cannot satisfy every want. But even with every conceivable commodity at hand, he would need to proceed first to the satisfaction of one of his wants and take up others subsequently in some order. He invariably has

the task, therefore, of arranging his wants in the order of their intensity. He is compelled to balance in his mind several possible satisfactions and determine upon an order of consumption as the initial step in his consumptive activity.

The underlying causes which determine the choice of satisfactions by the consumer are very numerous, for they include practically all the circumstances and forces that enter into the determination of the character of his life. Since the causes that influence the lives of any two individuals are seldom, if ever, identical, consumptive choices vary from person to person. For a similar reason, the wants of any given individual differ from time to time, and his order of consumption is seldom twice the same. The choice of satisfactions, therefore, is very much a matter of persons and of time and circumstances and is to be explained in full only by drawing upon many fields of knowledge. Certain facts concerning consumptive causes may be emphasized, however, without an enumeration of all the causes, and certain considerations that commonly enter into the choice of satisfactions may have our attention in the following paragraphs, even though we do not undertake to summarize all the factors of decision that enter into personal selections in particular cases.

The intensity of wants, upon which the consumer's selection of satisfactions is based, depends upon one or more of three principal causes or groups of causes. These principal causes can be listed as follows:

1. The very character of the wants in question is a factor of first importance. Some desires are inherently urgent, while others are of comparatively little consequence. The desire for food and other desires arising out of the necessity of maintaining life may be very much more intense than many lesser wants under similar circumstances.

2. But the circumstances under which any given want is felt are also factors in determining its intensity. Thus, at the approach of winter the desire for shelter or for fuel is more intense than at certain other times, and such desires may pass, temporarily at least, with the lapse of time whether they are satisfied or not. The desire for a faddish article of display depends almost altogether upon the continuance of the use of the article by others. The desire for food, even in comparison with wants that seem to

be insignificant, is intense only when circumstances are such as to give it intensity.

3. The third factor (which, strictly speaking, is only an especially important one of the circumstances governing intensity to which we have just referred), is the extent to which the consumer has attended to the satisfaction of the want or wants in question. The desire which otherwise would be the most pressing is reduced in intensity or entirely extinguished by the act of consumption for which it calls.

Though the three causes thus stated seem to be rather arbitrarily differentiated, they present points of practical difference when taken into account in the administration of consumption. We need make no further explanation of the second point, but toward the end of the chapter we shall return to the discussion of the first point under the title of luxury. The further explanation of the third point is to be taken up at once. That explanation lies in one of two very important facts or principles governing human desires. Both these principles have to do with the satiability of wants.

THE SATIABILITY OF WANTS

The first of the two principles relates to the fact of the insatiability of wants in the aggregate for any considerable period of time, and the second, to the satiability of every particular want at any given time.

Three causes underly the first of these facts. Very many of the wants, to mention one of the causes, which are satisfied in the present by some act of consumption are not completely extinguished. Thus, when one consumes food, he does not put an end to his desire for food once and for all. Most of our wants, in fact, are occasionally, and some of them regularly, renewed, and there is no such thing as effecting their final satisfaction. Even the most undeveloped peoples, therefore, fail to reach the point of permanent satiety. Secondly, while there are some wants that may be given lasting satisfaction and those also that pass away in the course of time, new wants almost inevitably take their places. There is apparently no ascertainable limit to the number and variety of the wants that may be developed by man. People of some economic advancement, consequently, are put to continuous

effort to keep pace with the changes in their wants. In the third place, wants are cumulative and do not simply supersede each other in the course of consumptive changes. With every increase of wealth there comes an enlarged capacity to enjoy and consume. There is possible, therefore, an indefinitely great increase in the very quantity of goods and services that people may desire and demand.

The statements of the preceding paragraph are not to be taken to mean that people invariably and unceasingly extend their wants, but rather that, by reason of one cause or another, no final satisfactions of all wants is ever accomplished. There are, in fact, counteracting tendencies which work continually against the suggestion of increased consumption and which tend to restrain desire. There is a conservatism of a sort that opposes everything new, and the force of habit restricts the expansion of consumptive activity. The counteracting tendencies are so strong at times as to cause general social movements toward simplicity and plain living. Yet these facts in no way impair the validity of the statement that wants in the aggregate are essentially insatiable if any considerable period of time is taken into account.

The satiability of particular wants at any point in time is a matter of common observation. One's desire for food is never so intense as to call for unlimited eating. One who has just completed a meal finds this want practically in abeyance; he can derive little or no satisfaction from such a meal as under other conditions would be highly desirable. One who owns several suits of clothes gets much less satisfaction from the utilization of an additional one than he would under the circumstance of lower satiety. One entirely without shelter feels a very keen want. It is possible to satisfy this want, and once satisfaction has been provided in a measure, the want itself has changed in degree.

It is sometimes objected that previous consumption may have increased a want and that one who has had his desire in part satisfied may have a stronger appetite for an additional satisfaction than he had for the first. It is probably true that a new good may awaken new desires and may do so unexpectedly. In such a case more might be anticipated of a second experience than was actually realized in the first. Nevertheless, in such an instance, the first act of consumption must have yielded very great satisfaction, and it is not so very obvious that the second

act, following immediately, could quite equal the first in results. The truth seems to be that even in the case of habit forming drugs and other appetite creating satisfactions, the amount which is desired at any one time is less if the consumer has already reached a degree of satiety. There are limits to the amount of satisfaction which can be derived from the consumption of goods under these as well as under other circumstances.

The reestablishment of wants with the lapse of time introduces a slight counteracting tendency in the operation of the principle of satiability. The lapse of time necessary to redevelop and reintensify a want is sometimes so slight that we may almost consider the tendency toward satiety and the tendency toward recreation of wants to run simultaneously as counter tendencies. Still, this is in no way invalidates the principle relating to satiability but serves, rather, to limit the application of the principle and to confine it to the satisfaction of present wants to which it is really intended to apply.

The situation of the person who has satisfied so completely all his desires at a given time that he has no further wants is somewhat different from the situations to which we have alluded in the explanation of our two principles. Money represents the collective satisfactions which such a person may acquire, since it may be exchanged for any existing commodity or service. We may say, then, that money has come to be of no use to him and that he can find no place to spend his money. Such a situation is inconceivable to most people; but an individual of very great wealth or one with a very limited range of wants might be so surfeited with everything available that goods in the aggregate would lose importance to him, and he would be in the miserable position of a person with no unsatisfied desires. But his condition could be only temporary, for he could not sustain life without the renewal of desire. The satiety of one instant is certain to be succeeded by the reappearance of wants in the next.

The second principle, to repeat, is to the effect that a particular want is capable of complete satisfaction at any given time. It follows, as previously stated, that at any certain time a want may be either very intense or may have disappeared entirely, and the intensity of the want at the time in question depends in part upon the extent to which it has already been satisfied. In terms of satisfactions, we may say that the amount of satisfaction which

one may receive in connection with any single want at a given point in time is very definitely limited. If the individual is near the limit of his immediate power to consume, the satisfaction that he receives from consumption of a particular sort is comparatively little. It is a point especially to be fixed in mind that this principle applies to the possibility of satisfying a single want at a particular instant of time, while the first principle has to do with the possibilities of consumption when many wants and a lapse of time are taken into account.

PRESENT AND FUTURE SATISFACTIONS

From the foregoing it appears that in its initial stages the process of utilization requires the balancing of want against want and that these wants are of different degrees of intensity. Emphasis is to be put upon the fact that wants are to be considered in their present intensity. The consumer is not to make his choices upon the basis of the satisfaction which would be received if the wants were either stronger or weaker, but rather upon the basis of the satisfaction which he may expect to receive in consideration of the present state of his wants. Nevertheless, the consumer does have the problem of making provision for the future and must take some account of future satisfactions. He must weigh future wants individually and in the aggregate and compare them with those which are immediate and of more certain consequence. The failure to make sufficient comparison of present and future wants constitutes improvidence in administration.

There are two methods of taking care of future wants. One who has a surplus of goods may store them and postpone the use of them. When such action is under consideration, the consumer balances particular wants in the present against the same wants as they may appear in the future, taking account of the extent to which they are now satisfied and estimating their probable intensity at a later time. A second method of making provision is by the conversion of present surpluses into money, or better yet, into claims to income. Income is then in such form that it may be fitted to any particular desire, and the consumer may balance his unsatisfied wants of the present in the aggregate against all his future wants and thus determine which is the more important or the extent to which one is more important than the other. A third

possibility exists in the opportunity for investment. When the consumer's surplus cash income has been put to productive use, he expects an increase of future satisfactions, and he balances, therefore, a measure of present satisfaction against a greater measure at a later time.

In the very nature of things, future satisfactions appeal to one less forcibly than do those of the present. The former are remote from experience, and their later importance depends upon many unknown factors. The prospect of their actual realization is characteristically uncertain. If one were to compare a present satisfaction with exactly the same satisfaction at a future time, the present would invariably be preferred. If the result were not so and if the future were as vivid as the present, one might neglect present needs to his own detriment and lose both present and future satisfactions. As it is, the future must outweigh the present after all allowance is made for the uncertainties of the future before later wants will be given preferred attention. In fact, the comparison is between the satisfaction of present wants and the immediate satisfaction which comes from the assurance that later needs will be taken care of or that there will be an increasingly greater consumption of goods in the future. It is in this way that future wants are made a reality in the present.

Because of the practically universal desire for assurance as to the future, the future is not likely to be overlooked in the comparison of wants and in the selection of satisfactions. Nevertheless, one may be mistaken in his estimate of the two classes of wants, and he may give one or the other either more or less attention than it deserves. If either were invariably preferred over the other, the outcome would be failure in the attainment of the maximum possible satisfaction. Those who consume when they ought to save for the future and those who save when they would gain greater satisfaction, even over a long period, by immediate consumption are both at fault in the management of their consumptive activities.

CONSUMPTION AND COST

The necessity for a choice between satisfactions arises not only from the fact that the consumer is physically limited in his capacity to consume at any given time, but also by reason of the

limitation of his resources. Because of the cost or expense involved in obtaining goods, as well as for the first cause stated, the consumer is put to the necessity of choosing a few of the many possible satisfactions which he may desire. Furthermore, while this exercise of choice might have the same result, regardless of the fact that two causes controlled it, if costs were exactly the same for all goods and services, the consumer's order of consumption is very likely to be modified by the fact that the costs he is required to consider are not uniform. We have said that he is compelled to choose between several satisfactions by reason of cost. We must add that the very order of his choices is changed because of differences in costs.

The costs of consumption are only the costs of production transmitted to the consumer. They are in the form of expenditures or expenses, and it is customary to speak, therefore, of certain things as being very expensive. It is possible for some of the costs to be borne directly by the consumer, as in the case where he receives goods not completely adapted to use. The one who buys textiles to be fashioned into clothing and those who buy foods to be prepared at home are themselves completing the process of production directly. When one produces an entire commodity for his own satisfaction, the items of direct cost are not likely to be overlooked; but in his choice of satisfactions among those he must buy, the consumer is very much inclined to give attention entirely to the cash costs, or expenses, and to disregard the other attendant outgo.

Since in consuming economic goods, as in producing them, costs contribute to the result, they are not to be considered as destructive of satisfaction. Costs do not hamper and hinder the satisfaction of wants but rather are a means by which consumption is made possible. Costs are properly regarded as an offset to the consumer's gains, or, as some would say, a disutility, but they are consistent with satisfaction and indirectly contributary to it. In the activity of consumption as in production, economy lies in keeping costs as low as possible in order that there may be as great a margin of gain over the necessary outlay as can be attained; for cost is a burden which it is the purpose of good administration to lighten.

The application of cost in the selection of satisfactions is manifested in actual practice in the changing attitude of the consumer who finds his order of consumption modified, at the store for in-

stance, on finding goods either more or less expensive than he had expected. He turns from one article which he had chosen on the supposition that it would yield the most satisfaction to another intrinsically less satisfactory, because the margin of gain over cost appears to be greater in the case of the second than in that of the first. In fact, most people find it difficult to make a rating of the desirability of goods and services until the necessary expense is known, and they are therefore inclined to make cost an initial consideration in the establishment of every choice and in the building of every order of consumption.

THE COUNTERACTING EFFECT OF ALTERNATIVES

Consumers are confronted with a difficulty in making their choices among desired satisfactions which has sometimes been called opportunity cost. He who chooses one thing must for the moment, and maybe permanently, forego another. Every unsatisfied want presses its claim upon the consumer and diverts his mind from a tentatively or finally accepted choice. A variety of possible satisfactions thus may hinder the final selection of a commodity or service or may impair the enjoyment of a chosen consumption after a selection has been made.

The consequences of the distracting effect of unsatisfied wants are important. The greater the number of unsatisfied wants, the less one may give himself to the enjoyment of the things he has acquired. The very poor are inclined to buy with misgivings, and they often consume reluctantly, feeling that there are greater needs which might better have been attended to. The situation is relieved in part by the intensity of the desires of such people, and we are not to conclude that they get less satisfaction from a given consumption than do the rich, who are much nearer the point of satiety and therefore less able to realize upon the utility of the goods and services they command. Merchants, in dealing with customers, bring out goods which a particular customer seems to demand until they have met his requirement. To display still more goods is to create alternatives for him and possibly either to delay his choice, to turn him to a new selection, or to reduce him to such a state of uncertainty that he can make no selection at all.

It would be very easy to overemphasize this phase of the consumer's experience, however. His difficulty arises out of the very

limitations of the human mind and out of circumstances with which every consumer is familiar. It is a matter of self-control, which the consumer will ordinarily attain early in his experience, to discount and eliminate these impinging factors of indecision. It lies, in other words, in the very nature of the act of making a choice finally to dispose of the rejected alternatives. The necessity of rejecting alternatives is not in a true sense an economic cost. It is not an expenditure made for the sake of satisfaction. It is not a difficulty imposed by the act of consuming, since, if there were no consumption at all, there would still be present the alternative unsatisfied desire. The act of making a choice does not create the dissatisfaction, but only compels one to reconcile himself to it and thus to bring it to an end. The unsatisfied desires do not even render consumption uncertain of achievement as does risk in production. Opportunity cost, so called, arises simply out of human limitations. It is a hindrance, possibly, in choosing and even in utilization, but it is a thing to be distinguished from those various expenditures which the consumer must periodically make as a necessary prerequisite to the acquisition of goods and services.

LUXURY

Goods may be classified from the standpoint of the consumer as necessities, comforts, and luxuries. This classification is obviously not a classification of the goods themselves, but of the wants which the goods are intended to satisfy. No one commodity is in itself a luxury or a necessity, but people's wants are urgent or otherwise according to their own needs and their attitudes toward their wants. With this reflection in mind, we may continue to speak as though the classification were descriptive of goods and services.

The word "necessity" may be applied to those goods that are used in the satisfaction of wants which are imperative and the satisfaction of which is considered essential to life. Necessity, as a technical term, relates thus to the most vital wants. Luxuries, on the other hand, contribute to less urgent desires; and those things which we call comforts are of intermediate importance to the consumer. According to this definition, we may say that luxury does not suggest such intense desire as does necessity, and

yet, to attain to the point where one may consume luxuries is to reach a higher point in the development of consumption.

The practical standards for the classification of particular goods exist in the minds of individuals separately. Nevertheless, there is a limited consensus in almost every community. There is a common acceptation of certain kinds of food, clothing, and shelter, and a certain amount of these things as being the necessities of life. Generally travel, amusements, works of art, and a few other things are by common consent considered to be luxuries. On the intermediate ground, there are many questions of classification to be settled by the individual consumer alone. Are recreation, legal services, medical and dental attention, and higher education, necessity, comfort, or luxury? There can be no answer to such questions except from the point of view of the person concerned.

In the first statement of the classification of wants, we have defined luxury in such a way that it indicates the relatively unimportant wants, even though they may be very frequently satisfied by all or a part of the consumers. This is not the only idea conveyed by the word "luxury" in popular use. In a second sense, luxury implies the infrequent and generally dearly bought satisfaction of important wants. Luxuries, then, are certain especially desired means of satisfying our most genuine desires. To state the matter in terms of goods rather than wants, those things are luxuries which are inherently desirable and generally unavailable to a given consumer. They are unavailable because the consumer is limited in means and finds many seemingly extremely important satisfactions beyond his reach. Luxuries are things that are scarce or costly to produce. Since the consumer can have them only occasionally, he regards them, as he says, as luxuries. This definition rescues luxury from the realm of the trivial and superfluous. It suggests that luxury is the object of the more intense desires as well as of the less intense and, except for the cost, might be preferred to many more common satisfactions.

The first of the classifications given above is based upon a simple arrangement of the consumer's wants in the order of their importance to him. The second introduces the element of cost. The two may be reconciled, since they have certain elements in common. Both are used to indicate the common order of consumption. Both imply that, whether by the greater importance

of the wants or the poverty of the individual, certain satisfactions are commonly chosen in preference to, or in advance of, certain others. There is no implication that luxuries are harmful, and only in certain circumstances could they be said to involve excessive consumption.

In a third sense, luxury is a matter of the difference between the scale of expenditures of one person and that of another. All those satisfactions which some people enjoy in excess of what the average person in the community enjoys may be regarded as luxury. This definition establishes a social standard of necessity, comfort, and luxury. People may condemn the alleged excess consumption out of a feeling of the social injustice involved in it, and they may do so even when they in no way envy the people whose activity they condemn. Thus, the very rich may meet the disapproval of the people among whom they live for their extravagant expenditures, though few in any way desire the specific consumption in which these indulge. In this view of luxury, the relation of the consumption in question to the consumer himself is not in point. The individual may feel all his expenditures to be within the field of necessities and comforts while the people regard them differently. But even this third definition has something in common with the other two. The expenditures which are here called luxuries are those of comparatively rare occurrence in the community, and they are those that seem to the majority to be the very least important.

The economic principle involved in this whole matter is that necessities are to be placed ahead of luxuries in the order of consumption. Common prudence dictates this to the consumer engaged in establishing his personal order of consumption. Differing as the consumers do in its concrete application, they severally accept the rule. In view of the third attitude toward luxury which we have described, there is every evidence that the community as a whole also accepts the rule. As long as there are people within the group who are still unsupplied with necessities, in the common judgment it is uneconomical to provide any luxuries. This is the principle of necessities for all before luxuries for any. If the object of the social control of consumption is the attainment of the maximum satisfaction for the group as a whole, it is economical to attend to the most pressing need first. By the law of the satiability of wants, the partial diversion of large in-

comes from those who have much to those whose wants are but meagerly satisfied would mean an application of income at a point where it would yield more than would otherwise be the case.

RECAPITULATION

We are now able to bring together the enumerated considerations which the consumer takes into account in the first step in his activity of consumption and to state, finally, what the outcome of his decision means in the balancing of his wants. The administration of consumption begins with a comparison by the individual of the importance of his various wants. We may add that in the social administration of consumption, a comparison of the wants of all individuals is the initial step. The consumer in making his comparisons takes account of the inherent importance of his various wants and the state of satisfaction to which he has already attained. He weighs present against future satisfactions and considers all expected satisfaction in connection with its necessary cost. The calculations which the consumer makes are intended to result in a selection of goods and services to yield the maximum satisfaction immediately and in the long run.

In its practical aspects, the process outlined causes a constant shifting of attention from one want to another and results in a certain balance between wants. No one want, presumably, is ever allowed to become very much more intense than another. If the result were always as stated, one would get about the same satisfaction from equivalent units of goods applied to any one of his various wants as to any other. There are two difficulties which interfere with the exact accomplishment of this result. There is no determining what are equivalent units except as the quantities taken do yield the same satisfaction. Thus, any two commodities are equivalent if they are equally important to the consumer. The proposition is not strictly true, furthermore, because of the fact that people often satisfy one want for a considerable period by a single act of consumption of some moment at the time. Other wants may need to be attended to frequently but never become very intense. In certain cases, a change of circumstances brings out one desire more prominently than another without justifying its immediate complete extinction. The consumer is not likely, therefore, to find his wants of equal intensity at all times, no

matter how carefully he may have measured and compared his desires in attending to their satisfaction. In spite of these discrepancies, however, the tendency to maintain a balance between wants is a reality and is the natural outcome of the process of comparing and selecting satisfactions.

In this chapter the discussion of consumption has been carried only so far as was necessary to reveal the essential nature of the consumer's choices. If we were to stop at this point we should have a very imperfect idea of consumptive activity, for we should have ignored many of the causes that influence and even dominate the consumer. He is not that perfectly rational being that we often fall into the error of assuming him to be when we are analyzing such processes as consumption, and even the most rational among the consumers are not free to make such simple calculations as might be supposed ideally to be possible. We shall find, as we turn to the study of the administration of consumption that the consumer's choices are determined in a very great measure by social causes.

VIII

THE ADMINISTRATION OF CONSUMPTION

Social direction and control. Public regulation of consumption. Personal control of consumption. Quantitative standards of living. Qualitative standards of living. The apportionment of expenditures. Maintenance of the standard. Protective expenditures. Development of the standard. Surplus income. The budget and accounts. Comparative practice.

We have come to an understanding of the meaning of the word "consumption" and have traced the steps in the process by which the consumer arrives at a judgment as to the state of his own wants and as to the satisfaction toward which he should direct his efforts. We find the preliminary steps to consist largely of the balancing of want against want and of one possible satisfaction against another. To understand the administration of this process, one must see that the factors of control and causation which enter into the process make the consumer's choice a much more complicated matter than it would seem to be from our survey of its essential steps. The consumer's decisions are affected by all the influences controlling the mind, whatever they may be. The very nature of the human organism, the constitution of the mind, heredity and environment to the extent that they determine individuality, and the physical and social circumstances of life constitute the fundamental elements of control.

We do not dwell at length upon all these factors because many of them lie beyond the field of our investigation. Neither do we attempt a classification of wants upon the basis of the primary causes, or incentives, back of them, since we, as economists, are not in a position to examine and study those incentives. But, as we proceed to the further consideration of that activity which finds its cause in wants, we may take note of such differences as do exist in human desires in so far as these differences have consequences in the administration of consumption, and we shall discover incidentally that the control of the activity of consumption has effects upon the nature and extent of the wants themselves.

We may begin with some attention to the nature of the administrative direction to which the satisfaction of wants is subjected, describe, secondly, the general policies which guide the consumer, and conclude with a description of certain practices of consumptive administration.

SOCIAL DIRECTION AND CONTROL

The consumer, as such, is subject to every sort of social constraint and compulsion that is brought to bear upon an individual in any capacity. We need not undertake, therefore, a complete enumeration of the methods and devices by which society asserts its power in personal affairs. One is compelled to conform to its practices and submit to its judgments as they are revealed, for instance, in the customs and conventions of social groups, large and small, and in the rules of morality and etiquette. The social dicta are sometimes only persuasive, at other times imperative. How effective they are in fact depends very much, of course, upon the individual concerned as well as upon the form of their expression. Thus, fads, fashions, and crazes overwhelm a part of the consuming population but leave others comparatively undisturbed. But those who resist and refuse to conform to the group in these matters may still be said often to be affected by them, at least, for such influences sometimes mark out the way by which a consumer may disclose his independence or eccentricity.

A force governing the direction which consumption is to take is to be found in the leadership of individuals who are especially influential in a social way. Such individuals may introduce change, or may act as a conservative force. Sometimes they are people who have simply an especial opportunity to bring their habits to the attention of the public, as in the case of actors. The rich have a very great influence on the consumptive choices of a part of the community, because among the consumers there are some who emulate those on a really or nominally higher plane of living. People in preferred social positions, including those who exercise political power or enjoy prominence and distinction by reason of their occupations or achievements, enjoy prestige, which in this way tends to become a factor in the administration of consumption.

Social forces have a controlling power that sometimes works by

indirection. In a group bound by custom to certain habits in the consumption of food, no different food may be available to the nonconformist. It would be very difficult to be a strict vegetarian when living with primitive hunting and fishing tribes. On the other hand, the productive organization may be so given over to the production of goods to meet a new desire that those who are not inclined to change may need to do so, regardless of the absence of direct social pressure upon them and for lack of a practical alternative. It is in many cases impossible to buy old-fashioned goods. Again, there is direct social control if any one element in the community, as for instance, the nobility or the rich, enjoys a predominant prestige and is able by reason of it to govern the consumer's very desire. The people in some lands willingly and eagerly follow the fashions set by the king or queen and the aristocracy. Finally, if the rich do not hold positions of especial leadership and yet are purchasers to so great an extent that the productive organization finds it profitable to adapt itself largely to the production of goods to suit their demand, the decisions of these particular people may be very far-reaching in their effects, and the rich thus may limit the consumer's choices to an unfortunate degree. In highly developed civilizations, however, there is not often any one group of consumers quite so influential as entirely to control consumption in any of the ways suggested.

There are many agencies that undertake in some measure the control of consumption. The public schools, the colleges and universities, and the special schools of domestic economy give instruction in the use of food, clothing, and recreation as an aid to health and physical improvement. The schools attempt to promote, also, the artistic use of goods in home decoration and city beautification. Various governmental bureaus and numerous societies interested in social welfare educate the people in certain phases of consumption through exhibits, pamphlet literature, public lectures, and the use of the daily press. The newspapers conduct columns for the purpose of advising their readers as to the purchase of commodities for household and other use. These agencies are largely educational in character and are generally disinterested. The direction of consumption is to a much greater extent, however, under the control of the producer, who by various devices of selling, such as the "demonstration of goods," "high pressure" and other salesmanship, and advertising in general, en-

deavors to create new wants and to change the direction of the consumer's demand.

So vigorous and persistent are these efforts of the producer that people have been misled in estimating the effects of salesmanship in the actual control of consumption. The salesman is represented to us very often as one who has the buying public at his mercy through his mastery of psychology and the arts of persuasion. But in fact the producer's efforts to sell educate the consumer, not only in goods, but also in the ways of salesmen. Competitive advertising and selling campaigns, furthermore, are often mutually counteractive. In so far as they are effective, they are likely to lead the consumer to greater deliberation and more careful choosing. By reason of the producer's efforts, the consumer, in all probability is made an increasingly positive factor in the selection of goods.

PUBLIC REGULATION OF CONSUMPTION

The social direction of consumption is principally of the informal sort which has just been described, but some control is exercised also through the formal activity of the state. The latter is social control given the binding power of the law, and it may take one or more of the following directions. The state may forbid and attempt to prohibit the consumption of certain specified goods and services. This is restrictive regulation. In practice it takes the form of the so-called sumptuary laws forbidding to the consumer such things as narcotics, alcoholic liquors, dangerous mechanical devices and weapons, and other things with which he is likely to imperil the lives of those among whom he lives or otherwise injure them. Regulation of a second kind is to be called assumptive regulation. The state itself assumes the burden of making consumer's choices through taxation and governmental expenditures. Society, through the agency of government, thus undertakes to exercise the discretion which otherwise belongs to the consumer, and the people collectively assume a part of the administration of consumption. Occasionally, there occurs a third form of regulation in which the state issues its mandate to the citizen and directs the expenditure of a part of his income to a specified purpose. Directive regulation of this sort results in the compulsory consumption of some particular good or service.

Certain European countries, for illustration, have required a part at least of the population to expend some of its income for insurance to provide protection against the helplessness of old age or unemployment or some similar contingency. It is generally assumed that this is not a proper state function in the present organization of the western nations, and hence we have not gone far in such regulation.

Directive legislation is very different in principle from that which is restrictive. The latter removes one of a thousand of the consumer's choices in a given instance, but the former removes the other nine hundred and ninety-nine possibilities for the expenditure of the particular sum which the state requires to be put to a specified use. Restrictive legislation is an interference in a measure with the individual's independence, presumably for the protection of society, and it expresses a conflict of interests; but it leaves one with great opportunities for the exercise of choice in the development of his life. Directive legislation, on the other hand, carries with it the suggestion of incompetency on the part of the individual and promotes his dependency. It has the appearance, at least, of compelling the individual to look after his own interests, though, of course, it is always justified by those that favor it by the indirect social gains presumed to come therefrom. One measure of directive control which seems to have met with a final acceptance is compulsory education.

The participation of the state in the regulation of consumption through taxation and governmental appropriations is of more consequence than any other formal control. It results, in effect, in a joint consumption of goods. Such state participation is not intended as a restriction or compulsion upon the individual, but as a substitution of collective for individual consumption. Much of the state's expenditure is for the very maintenance of the state itself, a benefit which all but a few are desirous of securing. But larger and larger sums are coming to be spent on things formerly provided by each person for himself and which might still be so provided if the people did not choose otherwise. The people have come to regard this common provision for their welfare as more satisfactory and convenient than any that would be possible by individual action alone. It is a means of insuring certain satisfactions which it is in the interest of the general welfare to make available to all. The provision of certain means for the preser-

vation of health, the extension of opportunities for recreation and amusement to people of little wealth, protection against personal violence, against the machinations of the predatory, and against the destruction of physical property, are matters best handled through public agencies. Likewise, payments in support of the public schools seem to be an indispensable common expenditure where general education is desired or required. The consumer sometimes regards his taxes as a forfeiture to the state. In fact, taxes are as much an expenditure for satisfactions as are contributions to the church, the club, and the retail stores.

PERSONAL CONTROL OF CONSUMPTION

The final act of control, except where there is positive public regulation, is at the hands of the consumer himself. In his part in the administration of his own consumption, he may be dominated by external influences and exercise little substantial control. If he allows himself to be governed entirely by circumstances and by those about him, his consumption is only an automatic response to external influences. His management is only nominal, also, if he is governed entirely by his own unreasoned habits. It is necessary that all consumers submit to some extent to such influences. Habits are an element of strength in the consumer's position in so far as he cannot afford the time and attention necessary to make a new and thoroughly scientific decision upon every act of consumption. Some habits, for that matter, are rationally established, as are also some of the customs of society. Among the latter are those that have been deliberately institutionalized because they have been found satisfactory after repeated experiences with them. There remains, however, the necessity for frequent new judgments and studied decisions in the consumer's own sphere of consumptive administration.

The consumer does make such decisions. Because the economists once portrayed the consumer as a person controlled more completely by reason than he actually is, it has become customary to go to the other extreme and describe him as one who almost never makes a sensible choice. We are engaged in selling things, it would appear, with almost uncanny shrewdness, but in buying things without the exercise of the least common sense. But it probably is not so in fact. We cannot afford to forget that the

explanation of the fact that other peoples' consuming habits seem so unreasonable to us may lie in our own uncomprehending minds.

There are still other attitudes of the consumer which may well have our attention before we pass on to the more concrete aspects of the management of utilization. All people are actuated by a desire to conform, in some measure at least, to social dictation. But at the same time every one desires to regulate his consumption in his own way. The result is a conflict between social and personal causative factors in the thought of the individual. One is moved at times by a desire for distinction and individuality as well as by the contradictory desire to be not too different and to avoid eccentricity. These are not irreconcilable tendencies, and both dispositions appear in people even at the same time. In fact, both tendencies may sometimes be satisfied in one act of consumption, with the result that in all matters people are inclined to keep near to a reasonable and generally accepted mean.

Nevertheless, the attitudes mentioned are not always found in satisfactory balance in individuals nor even in large groups. Thus, the tendency to conform is found in an extreme manifestation in primitive tribes and in the peasantry of some civilized lands. Over a large area there is to be found no variation in the food, clothing, housing, and even recreation and amusement of these people. The tendency to conform is manifested as well in the craze-ridden communities which exist in some numbers in the most modern nations, where people are slaves to the consuming habits of the majority. If the counteracting tendency were to develop, it would make for new wants and new satisfactions among the conservative peoples, and hence for economic progress. In the unstable modern community, it probably would make for conservatism with its attendant economies, and hence also for improvement.

A third conflict of tendencies is between the desires for equality and for inequality in consumption. People take satisfaction from the mere fact of having more than others; but, to some extent, the fact that others are not engaged in consumption upon a scale equal to theirs is a dissatisfaction. In the one attitude is to be found the basis of the utilization of goods for the purpose of making a display of wealth. Many consumptive expenditures disclose an intention to display a superior income and a larger scale of consumption than others can afford. Such practices have

been aptly termed "conspicuous consumption" and "competitive ostentation." Producers constantly appeal to the motive that leads people to attempt to outdo others in consumption, and goods are often priced to make it possible for only the rich to buy them, thus insuring to the consumer this peculiar satisfaction. In so doing, the producers are catering to, or trading on, vanity.

On the other hand, it would be an exceptional individual who could get satisfaction out of millions if he were compelled to live among his economic inferiors only. A millionaire of the metropolis, if compelled to live in a nation of uncivilized people, would likely develop a keen desire for a measure of equality. The inequality between himself and his fellows, in such a case, would be very much less distressing to the lowly element than to the man of wealth, because of the equality of the many among themselves. The particular satisfaction to be gained from a superior scale of consumption is lost entirely, generally, if the inequality between the consumer and those about him is so great that the latter are unwilling to respond or are incapable of appreciating its significance.

Consumers desire the opportunity of satisfying some of their wants in the companionship of other people; some things they prefer to consume privately. They have a tendency to sociability and also to seclusiveness. As one tendency prevails over the other, an individual or a group is given to consumption in the home, to reading in private, to hunting and fishing, to country life, or to solitary habits in general. In the other case, there is a preference for clubs and public entertainment, the popular vacation resorts, city life, and gregariousness.

QUANTITATIVE STANDARDS OF LIVING

The consumer's administrative decisions collectively resolve themselves into policies as the circumstances under which they were formed recur and as they are found to have worked out satisfactorily in experience. The accepted policies embody or at least reveal consumptive standards, or standards of living. They establish goals of achievement and tests of satisfactory practice. Thus, when one determines upon a certain quantity of goods and services, or the equivalent cash income, as essential to proper living and necessary to the satisfaction of his wants, he has created

a quantitative standard. He may develop qualitative standards as well. The standards belong to individuals as a personal matter, though they result from all manner of causation. They are roughly uniform, however, within limited groups of the population. They express the consumer's own measure of success in consumption, but since he lives in circumstances quite the same as those in which others live, his standards are similar to theirs.

The quantitative standard is of much greater importance in its effects upon productive effort than upon the character of the consumer's choices of goods and services. It acts as a spur to production when it is set high, and as a hindrance when it is low. It serves to determine the extent to which one is to consume, and hence the amount of income which one will seek to obtain. Its nature and its effect may be gathered from a brief statement of the results of certain observations made in connection with the employment of workmen.

In an experiment with workmen who had been accustomed to work 10 hours a day and to receive $12 in wages under a piece rate plan of payment, it was found that upon shortening their hours of labor they contrived still to earn the customary amount of wages by increasing their output. A case showing the reverse situation appeared in the experience of certain mill operators who had the choice of three grades of labor. There were those accustomed to receive $10 a week, others, $12, and a third group, $15. The employer offered wages which would enable any workman, if he continued at work, to earn much more than had previously been possible. All the workmen had determined upon their scales of income, or quantitative standards, however, and would continue to work only as long as was necessary to earn the desired amount in any particular week. The experience of employers who have gone into tropical regions where undeveloped people with low standards of living were offered incomes beyond their requirements has been similar. The employees could be kept at work only so long as they found it necessary to work to meet their quantitative standards.

Quantitative standards are not fixed for all time, nor does every consumer settle upon a single standard for all circumstances of life. He may have one requirement for single life and another to be attained before he will marry. Standards vary for the same person between occupations. One may be very content with one

scale of life in one situation, but feel that his mode of living would need to change if he were engaged in a business making demands of a different sort upon him. Among enlightened people, most persons consent to one standard for the present, but expect to improve the standard from time to time. There could be no such response to opportunity as was described in the paragraph above if the workmen were determined to advance in consumption. One may thus have a minimum and an ideal standard, or he may conceive of the quantitative standard as being a developing thing. Among such people, it is very difficult to discover the exact quantitative standard at any given time.

QUALITATIVE STANDARDS OF LIVING

Consumers also have standards of excellence to be attained in the satisfaction of wants. People differ in the extent to which their wants have been culturally developed, that is to say, cultivated and improved. There are those who have attained a considerable refinement of wants, and they enjoy satisfaction, material, intellectual, and spiritual, which make no appeal and are even unknown to those of lower standards. Furthermore, consumers differ in the quality of their tastes in the satisfaction even of the lesser wants. Some require goods finely wrought, of superior design, and of appropriateness to the intended use. On the other hand, there are the undiscriminating, who consume, sometimes in great quantities, but with no insistence upon the rarer satisfactions. They require no nice adjustment of goods to wants, and in many instances they depend entirely upon the example of others for their qualitative decisions. They take whatever the market offers, including, sometimes, the very best, but without full appreciation of the best.

Among the cultured are to be found those who are conservative in taste; but there are also, among them, those who are independent of convention and inclined to be leaders in the progressive improvement of consumptive activity. The one group has indirectly a restraining influence on production. The other promotes the development of the best in the way of new goods and services. Advertisers who deal with both these groups find them critical and exacting alike. They are insistent in their demands and very independent of the control of the producers and sellers.

Those of undeveloped standards are likewise divided into two classes. There are conservatives and also those who respond readily to changing influences in the field of consumption. The conservative people of this class are those who have simple requirements and are inclined to caution and even to suspicion of the offered goods and services. Or, they may be people who are bound by custom, or who have developed habits of long standing which they are reluctant to change. These people, also, dominate the producer. He is compelled to meet their requirements. They are largely unresponsive to that advertising which attempts to create new demand. But quite different are the people who are under no restraint either of habit, temper, or standards. They are susceptible to very inconsequential influences. They are likely to succumb to every passing fad and are often the victims of scheming and unprincipled producers. Their demand has done something to divert production from legitimate channels to the profitable business of relieving them of their incomes. They are sometimes people of little means, but very often they are those who have been freed from a binding conservatism of days of poverty and who have not developed qualitative standards to justify their superior resources. It is these people that have given us the spectacular display of bad taste in the social and the fine arts, as well as in the less important phases of their own private consumption.

The improvement of quantitative and qualitative standards is not to be accomplished entirely by economic machinery. We have considered education in its relation to production and have discovered that it contributes to the division of labor, the specialization of the productive personnel, and the improvement of productive ability. Education has its effect in these indirect ways in improving quantitative standards. Its service to consumption, however, is primarily in the raising of qualitative standards by the development of finer wants and good taste in their satisfaction. Education has a further economic aspect in that it is a consumer's good in itself. But as one of the several services which consumers may desire for their satisfaction, it is adapted, practically speaking, only to the gratification of those of comparatively high or growing standards.

The consumer approaches the particular problems of administration, ordinarily, with standards such as these, adopted out of

choice alone or accepted at the dictation of others; but the direction which his consumption is to take and, in a very definite way, his preference as to alternative satisfactions, are governed by personal objectives. These objectives are themselves much of the nature of standards, and they reflect also the consumer's quantitative and qualitative ideals. Both standards and objectives are crystallizations of causes and elements of control in consumption.

The following topics deal with the subject of good policy in the administration of consumption by the individual consumer. They describe the practical management of consumption as it might be worked out under ideal conditions and in the interest of the greatest possible economy. They only suggest, therefore, the practices and the shortcomings of consumptive administration as it is in reality.

THE APPORTIONMENT OF EXPENDITURES

The consumer's practical management begins with an apportionment of his income to various purposes, since he receives most of his income ordinarily in the form of cash rather than goods and services. The apportionment requires a calculation of income in order that accurate comparisons may be made between the expenditures of one class and those of another. One must take into account in this calculation all the goods which he produces directly for his own use and all the real income from durable goods, such as his residence, which are owned by himself. To be absolutely complete, the statement of income should include all benefits received in addition to wages, salary, interest, and dividends, whether by way of such privileges as discounts on purchases, free recreational facilities provided by an employer, traveling passes, the use of a house, or the services of public or private institutions for which no payment is made.

While all these elements of income are necessarily included in a statement which discloses perfectly the proportions in which different classes of wants are satisfied, there are often items so difficult of measurement that at best only rough estimates and inaccurate appraisals are possible. The benefits of the public service and the contributions of society in general are so difficult of calculation that, except as it is necessary to make allowance for them in one's expenditures in the form of taxes, they are to be left out of

consideration altogether. It is obvious, too, that some of these things are free goods and are of little real consequence in the consumer's practical problem of management. He will not be disposed to omit them, or to omit any other item of expenditure because of them. Nevertheless, it is important that the income statement contain all measurable items and all those elements of real income for which a cash expenditure would in all probability be made if the goods or services were not received directly and by other means.

The problem of distributing the income is complicated by the fact that there may be more or less income than the standard specifically calls for. A deficiency in income may be handled ordinarily by the restriction of consumption; but this is not always possible. The obvious alternative is to borrow from the income of some one else. Because the lender must be paid back in the course of time, it is only a temporary deficiency that may be met by borrowing. The case is quite different when one borrows for production. A loan, in such event, constitutes an investment. It increases the power of the borrower and provides the very means for its own repayment. When one borrows for consumption, the funds are not invested and they yield no increase. The task of repayment, consequently, becomes a burden upon future income with no offsetting future gains. Borrowing by the consumer amounts, thus, only to the postponement of a deficit. A very elaborate machinery for investment is provided in the economic organization, but little countenance is given to loans to the consumer. They involve great risks both to the borrower and to the lender. Loans for such a purpose are to be made, therefore, ordinarily only when there is reasonable certainty of an increase of income to the borrower in the future or when some durable good, such as a house, is to be purchased with the borrowed funds.

MAINTENANCE OF THE STANDARD

With the income calculated and its adequacy ascertained, the consumer is in a position to make a classification of his wants and to plan his coming expenditures. In his plan he provides, first, presumably, for his personal maintenance. What maintenance may mean in reality is to be discovered only by an examination of the standard of living. In any event, maintenance is not under-

stood to be simply the minimum of subsistence. Most consumers are incapable of making any calculation of such an amount. The maintenance expenditures are those which are required to sustain one according to his present standard of living, or to enable him to maintain his standard. Without proper provision of goods and services for this purpose, the individual may be expected to retrograde as a consumer, if not actually in physical and mental vigor.

The maintenance expenditures are very great in the case of some people and result in the acquisition of satisfactions not even acquired as luxuries by others. Therefore, there can be no complete enumeration of the objects of expenditure. Nevertheless, there are generally to be included such obvious necessities as food, clothing, and housing. These should be considered as a group to themselves because of their prevalence and importance. We may designate them as fundamental maintenance. A group of expenditures, secondary and incidental to the first, consists of the consumer's operating expenses, among which are those involved in the final preparation of food, and in the heating, cleaning, redecorating, and repairing of the house.

The operating expenses might possibly be classified as productive costs; but since they are incidental to the use of consumer's goods, it is practically necessary to provide for them out of consumer's income. Their true economic nature need not be obscured, however, by the fact that they enter into the consumer's administrative problem. For the most part, of course, they are not to be regarded as satisfactions in themselves, and they are items, consequently, to be reduced to the economic minimum as a means of increasing the gains to be derived from consumptive expenditures.

A third group of maintenance expenditures is directed toward the satisfaction of recreational and educational wants. There are to be included in this group all expenditures for amusements and entertainment and those incidental to so-called social affairs, the expenses of vacations, all outlays for books, periodical literature, schooling and for such personal hobbies as are recreational in effect. Unfortunately, the income of many people possessing excellent standards is not adequate to successful maintenance in all these particulars.

The fourth group of maintenance items embraces the civic, religious, and philanthropic expenditures. These are least impor-

tant if we may judge by their prevalence, but they are essential maintenance for those whose standards are high enough to require them.

PROTECTIVE EXPENDITURES

To every one there come, occasionally, unexpected demands on and unexpected failures in, income. Since such contingencies are not in accordance with the plan of consumption, it is very frequently the case that no provision is made for them. Yet contingencies must be anticipated if the consumptive plan is not to be upset. The emergency may be so great as to bring disaster if no allowance has been made or funds set aside for an emergency. Such may be the consequence of sickness, the loss of a position, an accident, the dependency of a relative, or the necessity for extraordinary contributions to social and public purposes. A similar difficulty is presented when durable consumer's goods, such as the house, are destroyed, damaged, or rapidly depreciated. The retirement or death of the income producer for the household may be calamitous or enforce a sudden retrenchment in consumption unless provided for in advance. It is economy in management to allow certain expenditures for the purpose of insuring the adequacy of income in times of difficulty.

The protective expenditures are generally in the form of payments for property, life, and other personal insurance, and appropriations to emergency, or contingent, funds. In all cases, certain small sums are set aside periodically, and the fund created is drawn upon only when an occasion arises for which it was intended. Insurance and emergency funds make possible the invariable continuance of consumption according to the habitual standard, and they yield the direct satisfaction of security.

One must take thought not to regard the sums set aside for protection as savings, even though it is true that the emergency fund may be kept in the same manner as the savings account. They are appropriations yielding an immediate return in security, and when absorbed for the intended purpose as some occasion arises, they are not lost or destroyed, but are realized upon. At the same time, one may make provision for the exigencies of the future by saving and investing his income in order that the later risks may be met with greater resources. In this way, funds may be accu-

mulated to be drawn upon in old age or in a period of declining earning power. The result is self-insurance with all the gains of productive investment as well. So far as possible, all emergency funds may well be put to some use in the interval within which they are not to be drawn upon.

DEVELOPMENT OF THE STANDARD

If one's income is small, it may all be disposed of in attending to the matter of maintenance and protection. As income increases, a constantly greater share is available for the purpose of improving the standard of living and advancing it quantitatively. This may mean a higher degree of personal comfort, better housing, private conveyancing, a dwelling place in a better neighborhood, and the assumption of greater social obligations in the church, the club, and in the community generally. Increasing income permits a greater dignity in personal habits and in business and opens the way to higher cultural development by education, by reading, or through music, art, nature study, or other artistic and scientific pursuits. It may result in increasing leisure for personal and social service, or for the quiet life sometimes desired in old age.

The method of provision for the promotion of the standard is by investment. The savings created for this purpose are not for withdrawal to serve an unexpected need, and they may be so disposed of, therefore, as to increase the income. If they do not increase income, they result only in a postponement of present consumption in favor of greater, but temporary, expenditures later. If the standard is to change, the income, therefore, must be put to productive uses through the investment machinery of the productive organization. The funds so appropriated, rather than the emergency funds, are actually saved. In no sense of the word are they consumed in the present. They represent, rather, a postponement of consumption in the present for the sake of an advance in the standard of living in the future.

To one looking forward to the satisfactions which are expected to result from investment, they are likely to appear to be luxuries; and yet they may be the essentials of one's projected future standard. If the investments have the effect of increasing the standard and scale of living, the new satisfactions, in any event, will come presently to be regarded as items of maintenance. To what ex-

tent one should favor developmental items, as against an immediate increase of maintenance items, is to be determined by that fundamental calculation of the importance of the present and future wants. If the present need is greater than the need for the protection of the future, it is wasteful to save. If development is possible without an overbalancing present sacrifice, it is economy to make provision for advancement to a new scale of consumption.

SURPLUS INCOME

The developmental expenditures are calculated and planned for. They are a part of the budget and are derived from the expected income. They are to be made regularly from year to year and not simply at times when income is greater than was anticipated. If, as sometimes happens, one has a surplus of income, it may be given to any one of several purposes. The surplus may be due to unusual results from one's productive efforts, to the fact that one's emergency fund has proved more than adequate, so that part of it may be diverted to other uses, to the fact that some want was overestimated in the budget, or, finally, to the fact that goods may be had at lower costs than is generally possible. The sum thus made available may be devoted, first, to some necessity among those enumerated in the maintenance list which was omitted from the expenditures for lack of income. It may thus repair a break in the standard. It may be devoted, secondly, to an ordinary expenditure by way of indulgence and so increase the scale of living for the time being only. It is by this process that most people secure such luxuries that they do enjoy. Since the adequacy of one's protection is always a matter of some doubt, the surplus, in the third place, may be given to perfecting the protective plan. Finally, the surplus may be given to the development of the standard; for there is no limit to the amount which may be saved to increase the income of later years. There is no invariable presumption that any one of these choices is the wisest.

A disposition of promotional funds and surpluses which is frequently made is in the purchase of durable goods, such as houses and vehicles, and in the making of certain betterments in the goods already possessed. The effect of such handling of one's funds may easily be mistaken, however. Thus, if one purchases furniture on the installment plan with payments extended over a

period equaling the life of the good in question, the payments should be regarded as maintenance payments only. Such purchases are simply one method of securing satisfactions by periodic payments out of income. They do not involve a promotional expenditure, since the result is not to increase one's income and scale of consumption in the long run. The expenditures may involve a sudden increase in the scale of living at the beginning and may thus make a change in the standard of living, but they cannot be regarded as developmental, since their effect is not to increase the income for the future. Though they may constitute an accomplished increase, they are not a provision for further increase.

A very different situation exists when one is able to keep up habitual outlays for maintenance and protection, and by savings in addition purchase outright a durable good such as a house. Savings are productive of income, and when invested in a house they have the effect of releasing a part of the income, formerly given to rent, to use for other purposes. The house has, in fact, become capital in the hands of the consumer. He now has his former cash income plus the returns on the investment in the building. Technically speaking, we do not consider a house used by a consumer as an investment, but there are good reasons why it is popularly so regarded. It is at least a potential investment and may be exchanged at any time for acquisitive capital or be converted into producer's goods.

THE BUDGET AND ACCOUNTS

The budget is simply the plan of expenditure for a coming period of time. There generally can be no very satisfactory management of consumption without some attempt at least at a budget, though the budget may be only a mental rather than a written one, and it may be very temporary in its duration. In its more elaborate form, the budget is an estimate of the income expected for the coming year and an apportionment of this income to various uses. It serves, then, as a control, or at least as a guide, in the purchases of the period. If the budget contains an exact prophecy and is followed carefully, it will correspond in full to the income and outgo statement which the consumer makes up from his personal accounts at the end of the period. The budget

forces the consumer to an anticipation of his needs, and his expertness in anticipation determines how closely the budget and the accounts conform in the end.

As we have suggested, budgets are not always carefully prepared and detailed plans. In the case of governmental bodies and many societies whose officers have limited power, it is desirable that the budget be explicit and complete and that it operate as a limitation on expenditures. But, even in the case of good productive concerns, the prepared budget may be omitted entirely; for the scope of the operations involved may be very restricted, and purchases may need to be made very rarely. The budget might be omitted, also, if the business were of such a nature that its purchases were to be adjusted to changing conditions daily, as is the case in some mercantile establishments. A budget under such circumstances might be more often violated than followed and for the best of reasons, and might therefore become useless. A consumer may get along very well without a carefully prepared budget if his income is always adequate to his desires, though, even then, some plan of meeting his regularly recurring expenses seems desirable. Sometimes, a person's income is so small and his own limitations and necessities so great that conditions practically determine his budget for him. In yet another situation a man may be so experienced that his habits of expenditure in themselves constitute a plan and are an adequate factor of control. Such a person would at least seldom need to revise his budget.

The problem of budgeting is simplified if one has at hand the exact records of his past experience. The best guide in the initial steps of perfecting the budget is to be found in good accounts of previous expenditures. These are not entirely to control the future plan, but they offer a basis of judgment, and if one may make comparisons between one year's experience and another, he will be better qualified to forecast his future needs. Budgeting and accounting together are the consumer's analysis of his choices of consumption, seen in prospect and in retrospect. They are the device by which he is led to improvements in his standards.

COMPARATIVE PRACTICE

The experience of many consumers should be made available for study and analysis to the end that general improvements in con-

sumptive methods and practice may be made. There are certain reasons why this is still practically impossible. Few people are accustomed to keep accurate records of their expenditures, and the absence of developed plans and of record keeping systems makes it difficult to compare such records as are kept. Those interested in the study of labor and in the administration of charities are the only ones who have been persistent in research in this field, though they have been aided by governmental statistical agencies. Such studies as we have, therefore, concern the budgets of the poor, of the employees of some one institution, or at best, the people of one quantitative standard of living. The studies are arranged to show what percentage of income is given to each class of satisfactions, though they were often worked out for the purpose of determining the cost of living in general and the amount necessary as a minimum for subsistence in times when the adequacy of wages was in question.

One of the earliest budget studies, and the one, no doubt, receiving the most attention from students in the field of economics, was made in 1857 by Ernst Engel, at that time head of the Statistical Bureau of Saxony. It was a study of the expenditures of workingmen's families having such a range of income as was common among laborers at that time. The result of the study disclosed an apportionment of income as indicated in the accompanying table.

TABLE I

ENGEL'S STUDY OF EXPENDITURES

Classification of Expenditures	Percentage of Income Given to Each Item of Expenditure		
	Lowest Income	Medium Income	Highest Income
Food	62%	55%	50%
Shelter	12	12	12
Clothing	16	18	18
Fuel	5	5	5
Education	2	3.5	5.5
Public security	1	2	3
Health	1	2	3
Comfort and service	1	2.5	3.5
	100%	100%	100%

From a comparison of these expenditures, Engel arrived at certain conclusions as to changes in the relative importance of the expenditures, for each of the several items, with increases in the consumer's income. His conclusions are known as Engel's laws and are, in brief, to the effect that as income increases the expenditures for food are a decreasing percentage of the total, the expenditures for sundries are an increasing percentage, and the expenditures for clothing and housing are proportionately the same.

While more recent studies show that the proportion of income given to the various items is somewhat in conformity with Engel's tables, the differences are so great as to destroy the validity of Engel's laws. We may take, for example, a study made by R. C. Chapin in 1907, the results of which were published in his *Standard of Living of Workingmen's Families in New York City,* which presented the budget experience of about 400 families. This disclosed that for those families having an income of $800 the expenditure for food was 44.3%; for rent, 20.7%; for clothing, 14%; for fuel and light, 5%; and for sundries, 16%. These percentages are at variance with those obtained by Engel. What is more important still, the variation in the percentage of total income given to rent between incomes of from $400 to $1,100 was from 26.8% regularly downward to 16.2%, and yet the group with incomes of $1,200 spent 19.8% for this item. The expenditure for food for the groups with incomes from $500 to $1,200 varied erratically from 44.3% to 45.6% and showed no downward tendency. In both these particulars the experience was contrary to Engel's laws.

A study was made by the United States Bureau of Labor Statistics in 1918-1919. The families selected to be studied were wage earners or workers on small salary and were scattered through many communities throughout the United States. A summary of the results of this study shows that among incomes from under $900 to over $2,500 the amount spent for food decreased, with an increase of income, from 44.1% to 34.9%; clothing expenditures increased from 13.2% to 20.4%; the item of shelter decreased from 14.5% to 10.6%; while miscellaneous items increased from 17.8% to 24.7%. This shows the decrease in the percentage expended for food that was to be expected in accordance with Engel's laws, but the outlay for clothing was very greatly increased and the expenditure for shelter was very greatly decreased.

While we have before us only a small part of the material which has been collected on this subject, it is obvious that it is impossible to establish laws covering the consumer's experience in this way with the information now at hand. It is quite likely that the variations are actually too great to justify their reduction to exact statement in any event, and even the most elaborate studies are likely to prove difficult of interpretation. The percentage of income which a given family or individual devotes to one class of expenditures depends upon a great many influences and circumstances, as our previous discussion has been intended to show. The results at which one would arrive by averaging the practices of large numbers of consumers would not necessarily be true of many individual cases and, therefore, would be of little service in controlling the consumption of one attempting to make use of this experience. On the other hand, the budgets, as averaged, might disclose the fact, and even the cause, of changes in consumer's practice and explain many differences between groups of consumers. They might show variations between communities, arising from differences in costs or from climatic and social influences. The studies which have been made so far show a difference between country and city practice, between the expenditures of people of one nationality and another, and between those differing in education and in qualitative standards. The size of the family is a most important factor affecting the proportionate distribution of the expenditures. The age and sex of the members of the family is of similar consequence. Finally, the amount of income very largely determines the relative importance given in the budget to necessities and luxuries.

IX

VALUATION

The process of valuation. The subjective element. Recounting and discounting satisfactions. The objective element. Indices of value. The circumstances of production as indices of value. The circumstances of sale as indices of value. Market price as an index of value. Personal and social judgments as indices of value. Errors in valuation. Compound utility. Joint valuation. Valuation of units and aggregates. Uniformity in valuations. Producer's valuations. Recapitulation.

As a manager of the activity of consumption, one is required to analyze his wants, compare them, and make a selection among possible satisfactions. The process by which this is done, the factors of control that determine the results, and the procedure of orderly administration have been set forth. There remains to the consumer, however, the necessity of procuring the goods and services which are to yield the chosen satisfactions. It may be assumed, generally, that there are goods to conform to the consumer's requirements and that the productive organization will place them at his disposal; but he, himself, must determine which of all those offered are capable of satisfying his want. From the planning of consumption, he must turn to the business of executing the plan by the selection and purchase of the things to be utilized. It is one thing to discover and center one's attention upon a desire for food, and another thing to choose the food to be used, or to recognize a need for new furniture and to find that which is suitable and satisfactory. Since the final act of consuming, in itself, is a physical or mental operation which calls for no economic attention, the valuation and purchase of goods are to be regarded as the final phases of the consumer's administrative activity.

It is not often that the consumer as such is engaged in the measurement of goods of his own production. He acquires and consumes, instead, the goods and services produced by others. To conduct his selection of goods successfully, the consumer needs, therefore, to know much of the methods and conditions of production and to be informed on the practices of the sellers and the circumstances under which goods are likely to be found available for

his purposes. A knowledge also of the physical nature of the materials out of which goods are made is an aid to the scientific management of purchasing. Everything which may contribute to the accurate appraisal of goods and to a reduction of the costs of goods to the buyer is a part of the proper equipment of the consumer.

Since the consumer appears so very generally in the capacity of a purchaser, or buyer, we are to speak of him in that capacity almost exclusively in the following pages.

THE PROCESS OF VALUATION

The first step in the process of valuation is the discovery or recognition of utility in some particular good or service. The consumer begins, possibly, with a casual observation of the good, or, in another instance, with a careful examination of the evidence of its want-satisfying power. It is the second step in valuation to relate the utility discovered to a particular want so that the efficacy and importance of the good as a means of serving the exact purpose of the consumer may be ascertained. Valuation is the process of establishing, subjectively, a relation between the want of the consumer and the utility of the good. Value is the desirability of the good from the standpoint of the consumer.

The distinction between utility and value is one that justifies further emphasis, for the words have often been used as though they were practically synonymous. We must have some word to express the idea of the "quality that makes a thing a good" and another word to express the relation mentioned in the paragraph above. Utility is the name of an attribute or characteristic of goods. It belongs to goods as wants belong to the consumer. While the two things may be intended to have some relation to each other, neither of them is that relation itself. The relation is value.

Utility, to repeat, is a property of goods and services which arises out of the process of production. It exists, therefore, in the absence of the consumer and regardless of the requirements of any particular person. In fact, the want-satisfying power of a good is evident, often, even to those who have no use for it. Thus, a medicine may be known to have curative qualities even though there is no one to be found who needs to put the matter to test. A steam

locomotive has a utility which is obvious even to those who would find the possession of one a burden. On the other hand, one cannot by an act of mind give utility to something that does not in itself possess the power to satisfy. There are some things which are capable of being used as food. One may not by mere thought confer this power upon things which are poisonous and destructive. Our wants are not to be served by just anything to which in imagination we may ascribe the power to satisfy. Goods and services have an objective reality independent of the variations of any one person's desire.

Since value is the applicability of goods which have utility to the satisfaction of a specific want, value rests upon two things but is not identical with either. Valuation is not essentially the measurement of a utility nor of a want, but, rather, of the extent to which an individual consumer will be able to realize satisfaction from a particular good in certain circumstances. The consumer may in one situation receive less than enough from the goods in question to satisfy the entire want or, in another situation, may receive less than the full want-satisfying power of the good. In either event, the value of the good is the amount of the contribution that the good may make to the one person's satisfaction under given circumstances.

If all foods were equally satisfactory, if all clothing served the consumer equally well, and if all other goods were of similar uniformity, the measurement of goods would be a simple matter. Once the consumer had decided which of his wants to satisfy, he would know which goods to purchase, and it would be a matter of indifference which unit of a selected commodity he put to use. If all goods were made up of simple elements and were constituted of interchangeable parts, one could select goods according to recipe. There would need to be no such separate process as that of valuation. As a matter of fact, the choice of satisfactions, uncertain as wants themselves often are, works itself out more nearly automatically and with less conscious attention on the part of the consumer than does the valuation of goods; for there are both subjective and objective elements to be calculated in fixing values. Upon the solution of the problem under consideration, the purchaser of goods brings to bear all his knowledge of his own want and of the utility of the goods under consideration, and all his experience in acquiring satisfactions of the same sort in times past. With these things

as aids to judgment, he draws inferences and reaches conclusions and thus conducts the process of valuation.

The resulting valuations are personal and peculiar to the one making them, in the same way as are the consumer's choices of satisfactions. There is no formula by which the results are obtained, and there can be no economic laws to state precisely the outcome of a matter which is so largely subjectively determined. However, we may discover and analyze the causes which have an effect in influencing the consumer and controlling his valuations, and, therefore, within limits, we may draw scientific conclusions as to the process of valuation. We are not to discuss in this connection, however, the causes of value itself. They are to be found in everything that may cause wants and utility. We are concerned now, rather, with the factors that enter into the consumer's measurement of value. Before describing them we may turn our attention briefly to the method of expressing value.

Goods and services are to be compared only with goods or services, since nothing else has the power which we desire to measure. We may express our valuations by saying that one article is worth as much as a certain other, or that one is worth more or less than another. Or, we may introduce quantities into the statement so as to establish an equation in all cases. One would then say that a bushel of wheat is worth two bushels of potatoes. This is not the customary way of expressing value, because we have the device of money by the use of which it is possible to express the ratio of one good to all others in one statement. If all values are expressed thus in terms of money, we may arrive quickly at any comparison between goods that we care to make, once the separate valuations have been established.

THE SUBJECTIVE ELEMENT

Since valuation depends upon the existence of a consumer and goods or services, the exact state of the two factors, considered as such, is a prime determinant of the result of the process in a given situation. The consumer's valuations are very obviously affected by the character of his wants. Much has been said to this effect already. It should be equally clear that his conclusions as to specific values have a tendency to change as his wants undergo development or as they are modified in any way. The secondary causes

of such changes are innumerable, but there is one which we have found to be of the very greatest importance by reason of the fact that it is continually in operation and very certain in its effects. This cause is consumption itself; and its direct consequence is the decrease of the intensity of wants. As the consumer attends to the satisfaction of his wants, they change and even cease to be wants; as a result, his use for, and his conception of the importance to him of, certain goods change.

In the preceding paragraph, we have carried the principle of the satiability of wants to the point of its application to the selection of goods. We have spoken of it before in its relation to the choice of satisfactions and the order of consumption. In its connection with the process of valuation, it is commonly called the law of diminishing utility. Once we recognize that utility is an attribute of goods, rather than a relation between goods and persons, the name "diminishing utility" is found to be inappropriate. It is the consumer's want that declines as goods are applied to its satisfaction, and there is no change in the remaining goods themselves. The law is, in fact, a law of diminishing value, to the effect that the desirability of goods of a particular sort grows constantly less in the mind of the consumer as he approaches the point of complete satisfaction.

We have no occasion to emphasize at this point the diminishing tendency which this law reveals, since the process of valuation is not one of tracing goods experimentally through a long series of acts of utilization. The essential fact for our use may be set forth in a law of the same import but so phrased as to state a present relation rather than a sequence. The importance of any good to the consumer depends, in part, upon the present intensity of his want as well as upon other circumstances; and the intensity of the want, in turn, depends upon the measures previously taken to satisfy it, and upon other causes. Values, we may say, have a tendency to vary with the intensity of wants.

The principle of diminishing value is of this additional significance in connection with valuation; it brings out the fact that one has no scale of values which holds good at all times. When we add to it the fact that there are many other causes affecting the state of one's wants and his use for goods, it appears that valuations are governed very largely by the actual present circumstances of the life of the individual concerned. Value is not the same for any

two persons nor for the same person under any two sets of circumstances except by occasional coincidence.

RECOUNTING AND DISCOUNTING SATISFACTIONS

While one makes valuations primarily in consideration of his present circumstances, he is not able entirely to remove from his mind the effects of previous experiences, and he is unable to avoid altogether the contemplation of future wants. Strictly speaking, one feels his various wants only in their present actuality and in their present intensity. It is not possible for one to put himself back into the vividness of earlier wants nor to experience the pressure of wants which are to arise in the future. Nevertheless, when we come to the making of valuations, the results of our previous acts of consumption are present as a part of our mental content. They may have been very satisfactory and may so affect our present attitude toward certain goods as to strengthen our valuations. We may even carelessly continue to use the estimates of former attempts at valuation, regardless of the fact that the need for the particular good has changed. On the other hand, we are so inclined to anticipate future wants that few of our own purchases are made for the moment's need alone. Wants which are not urgent now are expected to become so in the course of time; or goods are purchased for both present and future consumption with no separate calculation of the satisfaction to be gained at the various times. For these reasons, the present state of one's wants fails to be all-controlling, and the result is that valuations are more stable than we had assumed. Past, present, and future wants are intermingled, and there is, in general, no such rapid adjustment of valuations to one's changing circumstances as might appear in many instances to be the probability. The tendency toward fixed valuations is enhanced also because of the very great difficulties of the process of valuation from the objective standpoint.

THE OBJECTIVE ELEMENT

The basis of value, so far as the latter is determined by the goods, is to be found, of course, in their utility. This utility, of which we have so often spoken, is dependent upon many qualities which goods possess in different measures. Some of these give one

thing, rather than another, a peculiar fitness for the satisfaction of some consumer's want. But there is also to be taken into consideration the ease and convenience with which a good may be consumed, and its dependability in use. Such considerations are elements greatly affecting the power to satisfy and therefore having an influence upon values. Likewise, the durability of goods, or the probability there appears to be that they will serve future as well as present needs, is in many instances an essential item in the calculation. To this extent, the consumer takes account of the object of valuation in its future aspects with an effect somewhat like that of discounting future satisfactions. The goods are not always valued entirely for what they now are but sometimes partly for what they are expected to be.

Values depend, not only upon the qualities given the goods in the process of production, but also upon the state of preservation in which they happen to exist at the time they come under consideration. They have been fashioned with some particular use in view and have acquired a character as goods, but if they have deteriorated or, as is possible in some cases, if they have improved in quality, their present condition is obviously of some importance. In the valuation of things which are desired for immediate use, the consumer takes into account their actual condition. In all cases, whether the goods are to be used in the present or the future, their applicability to the satisfaction of wants is dependent largely upon existing qualities; and this fact has consequences in valuation even when there is every expectation that changes will take place in the goods before they are consumed.

INDICES OF VALUE

A superficial observation of goods may occasionally suffice to disclose their value. It may be possible in some instances, in the second place, to examine the object of purchase and even to put it to test before buying. The consumer often has knoweldge of certain goods, thirdly, through experience, and may rely on this knowledge rather than upon immediate observations. When these methods of valuation fail, the purchaser turns to the various available indices upon which he may have learned to rely or upon which he is compelled to depend in such circumstances. The evidences of value do not always pertain directly to the utilities under con-

sideration, but in all cases they have, at least supposedly, some direct or indirect bearing upon the power of the goods to satisfy wants. If the indices do not expressly reveal the peculiar qualities of the goods and the measure in which these qualities are to be found, they at least establish a presumption upon which the purchaser may act in the absence of exact knowledge.

THE CIRCUMSTANCES OF PRODUCTION AS INDICES OF VALUE

The consumer is accustomed to rely at times upon the place of production and the conditions under which goods have been produced as evidence tending to show their quality and character. In that fact is to be found a partial explanation of the vogue of imported textiles in former days in America. The goods came from regions known to be capable of producing the very best. Clothing which has been made in centers where styles originate is sometimes supposed to conform more closely than other clothing to prevailing modes. Machinery that is manufactured in places where establishments of a similar sort have congregated carries some reputation from the very fact of its origin there. Furniture made in Grand Rapids is known to be of a different grade from that manufactured in other places. Consumers in small towns sometimes discriminate in favor of goods sold in cities, on the supposition that such goods are inherently better or more dependable than those sold in the villages.

The consumer, in considering the origin of the goods, gives attention also to the cost of production of the commodity or service under consideration. There is a fallacy in the assumption that costs invariably result in utility, as has been indicated in a former chapter, and yet occasionally a consumer buys goods for the very reason of their high cost. Elaborately carved furniture and intricately woven fabrics, though very useless and ugly in fact, sometimes are assumed to be valuable because they carry in themselves evidence of the fact that their production required a great deal of difficult labor. It is true, however, that costs are an indication of value in some circumstances. The quality of the materials used, the perfection of the manufacturing process, and the skill of the labor employed are often reflected in aggregate costs. If this is known to be the case in a particular instance, the purchaser may properly take costs into account.

It is probable that the people are few who value ordinary commodities highly simply because their production was unusually difficult, though no doubt many take costs into account as an evidence of the utility upon which values are based. A very valuable present may well be highly prized because of the sacrifice it involves on the part of the donor and because of the affection which the expenditure of such an amount implies. Likewise, the handiwork of a friend may have a peculiar importance due to the personal cost involved. But these are not such valuations as frequently engage the attention of the consumer, since he receives the goods in such instances without cost to himself, and they are not objects selected for inclusion in his budget. On the other hand, when a salesman talks of selling goods below cost, there probably is seldom an acceptance of the fact by the purchaser as an evidence that the goods will serve his purpose especially well. Though no doubt the contrary is to be said of bargain hunters, the fact that the goods are to be sold below cost, if it is a fact, is ordinarily of no consequence to the consumer unless it increases the gain to be derived from the purchase of something already regarded as valuable.

THE CIRCUMSTANCES OF SALE AS INDICES OF VALUE

Purchasers find more than one index of value in connection with the circumstances of sale. The very place of sale is evidence as to the character of goods in some cases. While there are few extensive markets in which one would expect invariably to find uniformity of quality in any particular commodity, there are retail establishments which are widely known for the superiority of the goods they handle. In fact, it is quite the rule among dry goods and department stores, those carrying men's and women's ready-made clothing, and certain others, to specialize in goods of different grades respectively. One determines the quality of article he is to purchase by selecting the store at which he will buy. The name and reputation of a seller, even though he is not a regular dealer, is often a source of assurance to a purchaser because of the expert knowledge the seller has or because of his honesty and reliability.

It is something that the seller makes a statement as to the utility of the goods he sells. Not all sellers do so. There is even much

national advertising in which there is no description of the characteristics of the goods and no assertion as to their superior quality. Some statements of the seller may be an aid to the purchaser in making observations. Some of them constitute promises or warranties. The latter often are true evidence of the existence of value in the thing purchased, and they may be used to insure the replacement of goods found to be valueless. But warranties are often very unsubstantial and very hard to enforce. They are not a perfect index of value, and they may be used even to deceive the purchaser who does not realize how easily the seller may avoid the implied obligation of his warranties.

When goods are branded in such a way that the output of a particular manufacturer or seller may easily be identified, the brand or trade-mark may be an index of value to the consumer who has had experience with goods of the same make or source and to all those who have learned the reputation of the goods. Where great care is taken to maintain uniformity of quality in all goods sold under a distinctive mark, the purchaser may rely entirely upon this index. However, this, as well as other aids to valuation, may be misused by the seller and even by the buyer himself. There are people who suppose that the mere fact that a good is vended in a distinctive package or bears a name which is widely advertised and generally known is an indication of high quality and of adaptation to their personal needs. New and untried articles occasionally find ready purchasers by the thousands, among whom, seemingly, there are many who are impressed simply by the widespread publication of the name.

MARKET PRICE AS AN INDEX OF VALUE

Purchasers are disposed at times to rely upon the market price itself as a measure of the power of goods to satisfy their wants. Price is a factor in the process of valuation which is of much the same significance as the costs of production. There are many things in the consumer's experience to justify the conclusion that there is a relation between prices and quality, and, in a limited way, it is possible to arrive at true valuations upon a consideration of price alone. Nevertheless, there is a fundamental error in any assumption that prices are a proper index of the desirability of goods in individual cases. The prices are what they are, partly

because the consumers have found the goods to be useful and desirable. If purchasers were to cease to make independent estimates of the importance of goods for their own purposes and were to value them according to whether or not their prices were high or low, the market rates would have a basis in something which, in turn, was based upon themselves. Prices could rise to any height within the purchaser's means and yet never be at variance with his ideas of value.

We cannot tell whether things are worth the price if price is the only indication of what they are worth. Where a thousand consumers have drawn conclusions as to values and their judgment is reflected in prices, a single purchaser may make use of the results; but if many were to attempt to reverse the valuation process in this way, there could be no satisfactory outcome. If valuations are established on other bases than price, the purchaser may find some goods to be great bargains at current prices; but if price is the index, there is no such thing as a bargain. Merchants have found that articles reduced to half-price sometimes do not sell as well as they would if raised in price. Many people, having no basis of measuring value except price, naturally regard low prices as suspicious. Once sellers have discovered this attitude of the purchaser, prices become a still more unsatisfactory index. Merchants are then able to charge very high prices for articles comparatively worthless because of the consumer's error in method of valuation.

PERSONAL AND SOCIAL JUDGMENTS AS INDICES OF VALUE

Other indices of value are the direct recommendations by friends of the consumer and the indirect testimonials of those who have purchased and used the goods in question. The fact that they have done so is evidence to the consumer that the goods are useful in some way. The example of people who are respected for their knowledge of goods or who are known to exercise good taste and wisdom in their own consumptive activities is often very influential. The open example of these people is very important; but there are innumerable instances in which consumers go directly to people with a knowledge of such things as books, furniture, and clothing, or to people of general refinement, for their assistance. The people thus consulted recommend particular goods

or suggest the sources of the "best values." The advice of people who are known to be independent in their judgments and stable in their attitudes toward consumption is accepted as a reliable index by some.

Upon the basis of the practice just mentioned, there arises often a prevalent valuation, which is itself an index to some purchasers. Goods come to have a common or general social rating upon which the people of one community depend. The standard valuation is developed out of common experience, and it enables the individual to draw upon innumerable estimates, arising out of quite varied methods of approach to the problem, as a guide in his own purchases. This, as a method of valuation for the individual, breaks down, of course, if all use it and none comes to an independent conclusion.

The very nature of the indices mentioned discloses how impossible it is to classify and enumerate all of the many aids which consumers may bring to their assistance in the conduct of the process of valuation. It is a matter of good administration to discover in individual instances the appropriate and true index of the value of the commodity under consideration if one must rely at all upon superficial evidence.

In connection with this discussion of valuation, we have the opportunity to take note of the difference between the point of view of the consumer and that of the producer in dealing with goods. Producers, in their activity of selling, make observations with regard to the goods they sell which are much the same as those made by consumers but which they make for a different purpose. The seller brings to his assistance in the making of a sale a knowledge, not only of the goods, but also of every index of which the consumer may make use in his process of valuation. If the indices we have mentioned are factors governing the purchaser's attitude toward specific goods, the seller may make sales by urging them upon the purchaser's attention. In fact, the indices are sometimes the very content of the salesman's address to his customer in the spoken word and in advertising. We are able, at this time, to point out again the distinction also between the scientific and technical aspects of business. The indices which we have enumerated are causes underlying valuation and determining the tendencies of the consumer-buyer in making his actual selection of goods in the market. At the same time, they are the

technical aids of both consumer and producer in the concrete problems of administration and business operation.

ERRORS IN VALUATION

The discussion of the indices of value discloses that the consumer is liable to error in his use of the aids to valuation. He is likewise inclined to mistakes in the judgments which he bases upon his own knowledge and experience. There are consumers, also, who are psychologically so constituted that they are eccentric in their attitudes toward valuation. The very evidence upon which the consumer is disposed to depend may be so confusing and unreliable that the most expert will be unable to arrive at correct conclusions in all cases. If one relies on scientific data, he has yet to make application to his own desires and feelings. If he relies on the judgment of others, he must make allowances for the fact that their judgments are made for their own purposes and not for his. If he is ignorant of the essentials of the matter in hand, he must take precaution not to be imposed upon. Moved, as the consumer is, by conflicting desires and balancing so many considerations in his mind, he is confronted with a task in which error is easy and sound judgment a matter of considerable skill.

Values are a matter of fact; but, from what has been said, we conclude that the process of measuring them is not always successfully conducted. When the consumer has made a selection of goods, we say that he has made a valuation. We are correct in so saying, but it by no means follows that he has acquired something capable of satisfying his want. He may realize that his valuation was untrue, and he may feel a definite disappointment. The result may lead him to a reestimation of the importance of the goods. It is clearly possible, therefore, for one to have established in his mind purely supposititious values.

Erroneous valuations are the result, not only of miscalculation, but also of neglect, and they are often the outcome of situations in which people have ceased to give attention to the valuation process and have carried over old valuations into new circumstances and new times when wants have changed. Goods of a certain kind may be either more or less useful than formerly because they are not actually of the same quality, and the differences may have appeared without attracting the attention of the con-

sumer. The importance of some commodity may be much less, also, by reason of the appearance of other goods which create alternatives not previously existing.

One may be slow to recognize that some things have ceased to yield satisfaction and may make wasteful purchases out of habit and upon the basis of old appraisals. There are not many obvious illustrations of these supposititious values, because mistakes are not so often repeated and so freely admitted as to become matters of common knowledge. It seems, however, that there must be some such explanation as this of the fact that northern people who have migrated to warm climates have continued to make use of heavy and close fitting woolen garments. In such instances, customs, which are the habits of social groups, have fixed old valuations so firmly in the minds of the people that they give no consideration to the question of changing their modes of dress.

There are consumers who draw hasty inferences, those who have temperamental peculiarities, and some who are given to arbitrariness and obstinacy in the selection of goods. If a new religious sect or secret order is subjected to a measure of persecution, it will gain adherents, not only from among those to whom its real merits are thus advertised, but also from a class who draw the extraordinary deduction from such fact alone that that religion or social creed is just what they want and need. People are given, thus, to purely irrational attitudes toward consumption. If it is claimed that a nostrum is made of herbs used heretofore only by a savage tribe, it establishes in some minds the certainty of a utility which might be brought to bear in curing personal ailments. The fact that the savages had no known record of good health or longevity and no particular physiological or therapeutic knowledge, to them is immaterial. Possibly the ignorance among people with regard to physiology and chemistry accounts for the wealth of illustration there is in this connection. But there are other fields in which much is to be found also. The people of some cities suppose that white-shelled eggs are much more suitable for food than brown eggs, and whole communities are taken with the contrary notion. Innumerable fantastical ideas of value affect the consuming habits of individuals and of great social groups. Such facts complicate the task of the producer.

The selection of goods, if not valuation itself, may be affected by emotions which would seem, at first, to have nothing at all to

do with an economic activity. People dread humiliation, and, out of a proper fear of it, many a person will choose unsatisfactory articles rather than disclose his ignorance of such a matter, for instance, as the pronunciation of unfamiliar names, the nature of machinery he has not learned to operate, or the exact import of the various items of a menu in French. In these matters, the consumer may be found to be absolutely clear in his estimation of his wants and to have no confusion even as to values, but to fail in realizing the greatest possible satisfaction because of the compulsion to make purchases contrary to his valuations, or, at least, after an imperfect valuation. If his selections in such instances are to be taken as indications of values, the latter are to be understood to be fictitious values.

COMPOUND UTILITY

We should fall into much confusion in relating our knowledge of valuation to the actual practice of the consumer if we were to assume that he is engaged ordinarily in the valuation of single utilities. As a matter of fact, in a very large part of his purchases, he is seeking and procuring two or more utilities combined and is attempting to satisfy more than one want by the use of only one good. Clothing is purchased in some cases primarily for protection. It has additional utility if it makes a contribution to personal appearance. A garment is still more useful if it is of an exclusive pattern or of a rare fabric that not everyone will be found to possess. An automobile is a good if it carries one about. It is better if it takes one with speed, ease, and economy. If it is beautiful and attracts attention, it contributes still more to the consumer's satisfaction. There are some who would get additional pleasure from possessing and using the automobile if it were very costly and suggested to observers that the owner had a superior financial standing. Jewelry may be simply jewelry; but if one purchases it from a store which caters only to a select trade, it may be able to contribute, not only an artistic satisfaction, but a gratification of vanity as well.

We often entirely mistake the real utility for which goods are valued. To one person, furs are desired for warmth and comfort in winter use. To another, they suggest style and personal adornment and improvement and are for use at any time. Some sup-

pose diamonds to be purchased for their beauty and for use as ornaments. Some desire them as a means of displaying wealth. Others take them with the mistaken idea that they are an investment yielding interest, and they thus make them a storage place for wealth. Diamonds are used, also, to afford sanction to certain contracts. Since all these elements may enter into one act of valuation, the process of valuation is likely in many instances to be very complicated.

JOINT VALUATION

The valuation of compound utilities differs from joint valuation in that the latter has to do with more than one good to be purchased in the same act, rather than with one good possessing several utilities. Quite often, goods and services are purchased jointly. One who is served at a public dining room buys both food and service. The goods purchased at a retail store are taken in combination with certain privileges, such as the use of the conveniences provided especially for consumers, and with special services of many kinds, such as exceptionally prompt delivery. The goods and services thus purchased can be separated, but the consumer desires to have them joined, and they are actually more valuable to him than they would be if they were each to give separate consideration.

On the other hand, the customer of the stores too often fails to comprehend the full extent of his purchase and makes comparison of the cost of goods between one place and another without including all the elements for which he is expected to pay in one case or the other. Thus one may ignore the prompt service of a local retailer in comparing his prices with those of distant merchants. When goods are purchased together with premiums, with something "free," or with chances on a prize of some sort, the purchaser is inclined to the other error of overrating the amount that he is to receive. Another instance is found where goods are purchased with warranties of quality or of perfection or suitability, or with the service of repair for a time. Goods may be preferred, not because of superior intrinsic merit, but because of these supplementary accommodations with which they are combined. The secondary good is allowed to divert attention from the qualities of the primary object of purchase. The warranty,

for which the purchaser pays extra, may yield him an additional satisfaction through the assurance it gives him of the dependability of the goods, but it is a difficult matter properly to evaluate such a satisfaction.

Joint valuations are expressed in one figure, generally, as though one commodity alone were involved. Neither the seller nor the consumer is able to separate the total into its components and say how much each element contributes. Here, again, is a cause for imperfection in the process of valuation. If one considers, further, the problem of the consumer in attempting the joint valuation of goods each having compound utilities, he will understand why the consumer stops short of complete analysis in so many cases.

VALUATION OF UNITS AND AGGREGATES

Whenever one unit of a commodity is exactly like another of the same supply, each of the two units is given the same valuation, provided they are to be used by the consumer under exactly the same circumstances. If the units are considered at different periods of time, respectively, the results are very likely to be different because of the changed circumstances under which the later valuations are made. But, on the other hand, if the two units are considered for purchase together, at exactly the same time, and if they are purchased for the satisfaction of a single want, they constitute in themselves a single object of valuation.

Under such circumstances, one unit might be very important, but two units would be more than enough. The purchaser does not arrive at a valuation by adding together the importance that he would attribute to each of them if they were offered, under the same circumstances, separately. Rather, he considers the entire supply as one unit. If one were compelled to consider the acquisition of ten units or of none at all, he would need to value the ten as a whole and weigh in his mind the satisfaction they would yield and the cost they would involve. Possibly the entire ten would be valued no more highly than one alone. It would not likely be so if there were other uses to which the surplus supply could be put. The goods could often be disposed of. The point is, however, that when one is engaged in estimating the importance

of the utility of goods to be purchased in one purchase, the entire supply is subjected to one process of valuation.

UNIFORMITY IN VALUATIONS

The peculiarities and the variability of individual valuations have predominated in the discussion so far. It would be easy to overemphasize these characteristics. It is possible to have a general agreement among consumers in many valuations. In fact, the experience of consumers is so much the same and the external evidence upon which they base their estimates is presented so generally in the same way to all of them that there is a definite tendency toward uniformity in valuations. The fact that valuations are expressed commonly in terms of money promotes the tendency toward the formulation of a common judgment. Money makes possible an exact expression of values and affords a basis of comparison, which, as we have seen, has its influence in the very process of valuation itself.

Personal valuations govern the consumer in the selection of goods for his own use, even though he is influenced by the similar estimates made by others. But when there is found to be uniformity in the valuations of many people, it becomes a fact of especial economic consequence. The common valuations are a better guide to producers in preparing goods for the consumer than are innumerable individual valuations. Uniform valuations in the market help the producer to determine what quantities are to be produced in view of productive costs and whether or not the goods the producer has on hand may be disposed of to the consumer profitably to himself.

PRODUCER'S VALUATIONS

There are other uses for the word "valuation" than that to which it has been put thus far in our discussion, and we are under the necessity of correcting and completing our definition. Any measurement of goods in their economic aspects is a valuation. The measurements are to be made only by consumers and producers, but the latter have several purposes and more than one method of measurement. In speaking of corporate stock we have had occasion to mention par values, book values, and market

values. The valuations made by producers are to have a more extensive treatment in the chapters to follow; but there is one point in this connection that requires brief attention here and which may be given its final statement.

There are valuations of goods to be used by producers which are made by buyers who appear in the same market with consumers. These buyers, though they represent producers, are hardly to be distinguished from others in fact; and there is no need why they should be, since all buyers proceed to an estimate of the importance of goods in much the same fashion. The goods which the producer buys are to be used as capital in his business, and he needs to pass upon their qualities by a process of analysis very much like that undertaken by the consumer. He depends upon indices of value of exactly the same sort as those upon which the consumer relies. The producer-buyer has one advantage over the consumer in certain circumstances. He is sometimes able to calculate the income which he is to derive from the use of the goods much more exactly than can the consumer, inasmuch as he will ultimately receive the benefits in cash from the sale of the things purchased or from the sale of their product. But this is not so great a difference in practice as at first appears. The producer can determine matters thus exactly only after the use or disposal of the goods and not at the time that the purchase itself is made, except in very rare instances.

RECAPITULATION

Valuation is the measurement of goods in their economic aspects. Remotely or immediately, valuation is the estimation of the power of goods to satisfy specific wants. The income producing power of goods immediately underlies value to the producer; their direct applicability in consumption is the basis of value to the consumer. Since, ultimately, all goods are intended either to yield satisfaction to the consumer or to serve in creating other goods upon whose value he will decide, the governing valuation is that made by the consumer.

While valuation is not the comparison of one want with another, it assumes, necessarily, the existence of wants and a previous calculation of their nature and intensity. Since the calculation and the process of valuation are both personally controlled, the

valuations of persons differ. By reason of the elements of change in the want and the goods, valuations change, singly and collectively, from time to time. There is, consequently, a continuous process of revaluation, and it is only by coincidence that common valuations do exist and that there is stability in valuations. This coincidence rests on substantial and continuing causes, however, and is, as a result, a prevalent situation in economic activity.

All this has something to do with value but is not the process of valuation itself. That process is the acquisition of knowledge of the goods which are to be estimated, and the drawing of inferences therefrom, or, in the absence of knowledge, the drawing of inferences from such evidence as there may be as to the adaptation of the goods in question to the want of the person attempting a valuation. If valuation is a part of the administration of consumption, as we suppose, there is no complete interruption in the consumer's chain of succeeding valuations. The conclusions which he draws today as to the value of a commodity are tested in the light of the results of his use of the goods, and his later valuations are perfected by the application of experience. The value of a commodity is its want-satisfying power to a particular consumer, and his valuation corresponds to the fact itself, provided his knowledge of his want and of the utility and applicability of the good is clear or his judgment in the administration of this part of his consumptive activity is accurate.

ECONOMICS

PRINCIPLES AND INTERPRETATION

PART III

THE MARKET AND PRICE

X

THE MARKET AND MARKET DEMAND

Trade. Price. The market. Competition. Demand. Potential and realized demand. The demand curve. Elastic and inelastic demand. Extreme elasticity. Extreme inelasticity; fixed demand. Reversal of the demand curve. Joint demand and interdependent demands. Monopoly of demand. Change in demand.

In all that has been said previously upon the subject of production, there has been an assumption that the producer is to deal with the consumer; but there has been no discussion of the methods by which an agreement between them is effected. The consumer has been presented in the preceding chapter as a buyer of goods and services; but in considering him as such, we have centered our attention upon his administration of his own affairs and his valuation of the object of purchase rather than upon his relations with the seller. We have had occasion barely to mention the fact, also, that producers, as well as consumers, are buyers of goods. They purchase from others the raw materials and the partly finished and finished goods required in the process of production, and there is intercourse between one producer and another much like that between producer and consumer. The relation between buyers and sellers is to be described and analyzed now as a subordinate, though very extensive and important, phase of the study of production and consumption.

TRADE

Every producer in an economic system in which there is division of labor has from time to time a surplus of certain goods which he expects to dispose of to some consumer or to another producer. These goods do not have their complete and final utility until they have been made available to the purchaser. It is a part of the productive process to prepare them and deliver them in the form, at the time, and at the place required by those that are to utilize them. At that point there occurs the transaction which is called trade. It involves a meeting of minds and a resulting exchange or

transfer of goods. The consumer is enabled to enter into this exchange because, in his capacity as a producer, he also has created a surplus of goods or services. Each of the parties to the transaction is specialized in the producing of relatively large quantities of some one, or a few, commodities. Both may assume, in a situation of highly developed division of labor, that what they lack in goods may be obtained in trade for the things which they have in great quantity. It is the expectation of both parties, consequently, that there will be an exchange of goods, and that each will appear as a buyer of some things and a seller of others.

If goods are traded directly for goods, the transaction is called a barter, or, sometimes, simply a trade, to distinguish it from a purchase or sale. Barters do occur; but it is not always possible to find a purchaser who desires the goods one offers and in the quantity in which they are available and who at the same time has something to sell which can be accepted in exchange. Consequently, most trading is effected by the use of money, and even in those instances in which a direct exchange takes place, the agreement is made in terms of money. There are still other reasons, to be enumerated later, why it is convenient and desirable to conduct trade with money; but the practice so complicates the relations of those concerned with trade that it may easily cause one to overlook the very important fact that in its ultimate aspects every trade is an exchange of goods for goods. When the transactions involving the use of money are traced far enough, as we shall take occasion to trace them in another connection, they are found to resolve themselves into a series of transfers with goods as ultimate income and outgo and with money only as a transitory factor.

In order that there may be trade, there must be an agreement as to what goods are to be considered the equivalent of others or what amount of money is to be given in exchange for that which is bought and sold. If there is to be a barter, the goods offered by the traders must be compared and a ratio between them agreed upon. If they are found to be exactly equivalent, or if it is possible to determine the amount of one which corresponds to a certain quantity of the other, a ratio of exchange may be established and a trade effected. Either may then be said to be equal to so much of the other. When goods are to be traded for money, an

agreement upon a trading ratio of the same sort is necessary; but it is customary to think of the result as only a measurement of the goods in terms of money, rather than as a measurement of each element in terms of the other. Generally, therefore, the process is one of establishing a rate of exchange upon only one good at a time and by comparison only with money.

PRICE

The attitude of the purchaser, as he approaches a trade, is governed largely by the many causes which govern his estimate of the importance of the goods under consideration in serving his own purposes. Thus the consumer's personal valuation is a factor in his determination of a satisfactory rate of exchange. The buyer realizes, however, the possibility of securing some things for less than their actual value to himself personally. He enters the market, therefore, with his estimate only as a maximum rate and with the intention, generally, to reject any higher rate and to make no purchase in any case except at the lowest possible figure. The trading rate, therefore, when once established, is a fact separate from the buyer's valuation.

The seller, on the other hand, has a quite different approach to the question of the rate of exchange. While the purchaser has in mind certain expected satisfaction or some profitable utilization, the seller, in most instances, is offering goods for which he has no personal desire or need. He has produced or acquired them for the purpose only of selling them to others, and it is by so doing that he gains an income. The trading rate fixes his gains rather than his costs. Even if the goods are things of the sort for which the seller has some use, he very generally has them in such quantities that there is practically no alternative to their ultimate sale. Therefore, even if the seller were able to establish a personal valuation, he would have no object in doing so. The possibility of disposing of the goods depends upon their importance to some one else or to many others, and the seller undertakes a measurement of that possibility and that importance or, specifically, of the power of the goods to command other goods or money in exchange.

The measurement which the seller makes thus is in fact a valuation; and in some instances it may not differ at all in its results from some consumer's valuation. But the seller's measurement is

a measurement from a point of view different from that of the buyer and one made for a different purpose. The results depend in most cases upon something more than one person's attitude and desire. It is possible, of course, for the purchaser of goods also to make just such a valuation as that which the seller makes. No doubt very frequently, through his interest in purchasing costs, the buyer attempts to estimate the amount which the seller may reasonably expect to receive in exchange for his goods, considering all possible buyers and all relevant conditions. The calculations which the buyer and seller make may thus be very close together. In estimating the possibilities of sale and the practicability of various exchange rates, however, the buyer turns from his personal valuation of goods to a consideration of the possibilities of selling or, at best, to the forecasting of purchasing costs. It is obvious that the calculation of the power of goods to command others in exchange, as a matter of valuation, is especially the business of the seller rather than the buyer and is almost a necessity in the management of the production and disposal of goods.

Upon the basis of his estimate of their exchange, or market, value, the seller establishes the price of the things he has for sale. Price is the rate at which goods are offered in trade. It is the ratio which the seller proposes to establish between certain goods, on the one hand, and other goods or money, on the other. As has been suggested, the purchaser likewise may name a rate upon the basis of which he is willing to buy. This also is sometimes called a price, and our definition might be expanded to include the rate at which goods are asked, as well as offered, in trade. However, it is only the expert and specialized buyer who finds himself in a position regularly to take the initiative in fixing the trading rate. Most people are engaged in the purchasing of hundreds of goods and services. They are likely to await the proposition of the seller who deals in a comparatively few commodities and whose business it is to present the goods for, and measure the possibilities of, sale. The principal fact, therefore, is that the seller offers goods in trade, and in so doing sets a price upon them. The few, though rather important, exceptions that there are to this practice introduce no variations in causes and results which make it necessary carefully to distinguish in this matter in our further discussions.

We must pause to differentiate three ideas which have been introduced so far and which may easily be confused. (1) In the first place, trade is based upon an agreement as to a rate of exchange in each individual case. The exchange rate is a fact established by the act of trading goods for goods at a certain rate. (2) But this rate is not invariably exactly equivalent to the power of goods to command other goods in exchange, or exchange value. By mismanagement, or otherwise, the actual rate of exchange may be less than this value. The goods may not be disposed of to the best advantage. (3) In the third place, price, which is the rate at which goods are offered in trade, does not always correspond either to exchange value or to actual exchange rates. The price of goods may be either more or less than their full exchange value; and if the price is more, so that no sale results, the price fails to become an actual basis of trade. If the seller correctly measures the true exchange value of his goods and sets his price accordingly, with the result of a sale at the highest possible rate, then price, exchange value, and actual trading rate all exactly coincide and are to be expressed in the same figures.

The several facts thus presented are so related that their causes can not be separated, and they are to be studied jointly. Our principal concern with exchange value is to be in the study of the process of its discovery and measurement by traders, which process results in price. Our interest in actual trading ratios also is not in the accomplished fact but in the methods by which a price may be so calculated as to become effective in trade. All the points to which we have referred are to be brought together, therefore, in a treatment of prices, with emphasis upon effective prices.

THE MARKET

There is much disconnected and irregular trading even in highly organized communities, but most of the transactions of buying and selling in the modern world are the organized and methodical operations of the market. By the market we do not mean a particular building or plot of ground where traders may assemble for the conduct of business, though the word is to be used properly in that sense to some extent. There are markets, even of world-wide importance, so concentrated at some focal point that there is pro-

vided an especially equipped building where buyers and sellers meet to trade. There are other markets identified with some one street or section of a city, and we may regard every merchant's place of business as a market in a small way. Yet the activities of these market places are of consequence over wide areas and what seem to be simple transactions confined to one place are steps in trade sequences which are often long and complicated. The traders in many markets are far removed from each other, and dealers buy and sell goods in distant places often without seeing the things in which they deal. The market place, therefore, is only a feature of something of quite a different character which we properly call the market. The word market refers to the whole sphere of trading activities. The market for corn suggests the opportunity of buying or selling corn, every factor affecting the prices and the amounts that will be bought and sold, and all of the persons and places concerned in the transactions. The market is as broad as the influences that determine its operations and fix its ratios of exchange.

The scope and limits of a particular market are determined by such factors as the following: the extent to which occupational and geographical division of labor create the necessity for trade; the location of the producers, with all the geographical and other controls that govern it; the location of the consumers or other buyers who by reason of such causes as result in demand are disposed to purchase the commodity in question; and the means for communication between buyer and seller, including the facilities for the physical movement of goods. There are limits to the market which are sometimes arbitrarily fixed by political boundaries, by governmental restrictions, by unfavorable transportation rates, or by the racial and other antagonisms of peoples. Quite often markets overlap, and a producer of goods may have the opportunity of transferring his activities from one to another without change of location. There is no market if the demands of the consumers and the supplies offered by the producers do not correspond in essential particulars. No extensive market ever develops, furthermore, until there has arisen some opportunity for the specialization of producers.

Once the boundaries and extent of the market are determined, the latter may be organized in any one of many ways. In some cases there is a market center where the transactions tend to con-

centrate or where a balance is effected between demands and supplies not always equal. Sometimes there are several centers to be kept in adjustment with each other, some of which probably are subordinate points of market concentration. The cotton market of the world is governed largely by the activities of Liverpool. The diamond market is centered in Amsterdam. The market for iron and steel in the United States is distributed between a few cities of which Pittsburgh is most important. Wholesale groceries are concentrated in metropolitan cities, but there are subordinate wholesale markets in many smaller cities. In some cases the productive and consumptive divisions of the market are concentric, and in others the two occupy different regions entirely. In the United States, the production of beef animals is chiefly west of Chicago, but the greatest consumption of beef is east of that city. Some markets are highly organized, and the various participants in the trade are grouped into societies or associations. In others, the people concerned have no unnecessary relations with each other. Market activities give rise to commercial cities and determine very largely the layout of many cities not established entirely for the purpose of trade. The metropolis is the city where the trade activities of the people are most largely concentrated.

COMPETITION

Whenever a market exists, each buyer and each seller operates, generally speaking, in a field of other buyers and sellers. Every seller has a choice of buyers with whom to deal, and every buyer has the alternative of making his purchases from one or another of the sellers. The result is competition among those who are offering goods and also among those who are seeking to buy. Competition would be a matter of little consequence if markets were always perfect in adjustment and if demand and supply were always equal. However, when there is a possibility that some of the buyers will be unable to secure what they seek, each attempts to insure his own satisfaction by prompt acceptance of the goods at the prices at which they are offered or by bidding against the others if necessary. Such competition has a tendency to lead to purchases at a figure close to the upper limit of the buyer's calculations. The same sort of competition exists between sellers, all of whom are anxious to dispose of their goods and among whom

are those who will force prices down by their efforts to sell, if necessary, to the lowest possible point.

The conduct of buyers and sellers described in the paragraph above is competition in its simplest form; but competition goes much further than this. It is not a matter of exchange rates alone, but includes also all other attempts which buyers and sellers may make to win or control in trade. Instead of modifying exchange rates, buyers and sellers may use other devices of persuasion and may vary the terms of their offers in any one of many particulars. The sellers often engage in competition by trying to outdo each other in the quality of the things they offer for sale. When prices are the same among all of them, each may attempt to win customers by making his goods better than those of other producers or by attaching services to them that the other sellers do not, by way of compounding utility. As a result of competition, sellers accommodate the consumer in many ways which increase the satisfaction that he is to receive or which are at least effective in securing his attention and favorable attitude.

When misused by the seller, competition may subject the purchaser to deception and fraud. It may be directed also at the destruction of a rival seller. We are warranted in assuming, however, that such practices are comparatively rare. It is only occasionally and in a certain few markets, furthermore, that a cut-throat reduction of prices is possible. It is important to see that in any event the unfortunate results of the misuse of competition are not essentially the outcome of this market force itself. Competition is a part of the process of doing that which, from the very nature of his activity, it is expected that the seller, or buyer, will do and ought to do. It arises out of the producer's effort to meet the demand of the consumer or other buyer, and the latter's effort to acquire goods for use. Furthermore, competition is a force that may be expected, ordinarily, to result in genuine economy. As a result of competition, buyers are put to the necessity of the careful estimation of values and careful comparison of values with costs. Producers are compelled to effect reductions in the costs of production in order to meet the competition of others, or in other words, to increase their productivity. If competition were entirely a matter of taking away from another what he already possessed, it would be destructive and harmful. It is,

rather, a force compelling producers generally to offer the maximum that their creative power permits.

Competition leads the seller even to the point of a consideration of the remote consequences of his present trade policies. He may have in mind, in setting his prices, the development of sales to be expected from favorable prices to the consumer. He comes, therefore, to fix his present prices in consideration of later transactions and of the ultimate success of his business. Thus to consider future consequences is good business policy regardless of competition, but it is especially the rivalry of other concerns that makes such calculation a necessity. But competition goes even further than this. It leads to the fixing of prices which will develop the very consuming power of purchasers. Railways may be inclined to offer favorable rates to the people of tributary regions as a result, in part, of the rivalry of competing lines and in hope of increasing the need for the railway service.

In practice, competition exists where commodities are offered at a uniform price throughout the market and also where prices differ. As we shall see, it is characteristic of most prices that they tend to become uniform in any given market. No buyer ordinarily will pay more for an article than another is required to pay for the same article, no matter what his personal estimate of the thing in question may be. No seller is disposed to take less than another is able to get for identical goods when both sellers offer their goods under the same conditions. Competition is a cause of, and leads to, uniformity. Such uniformity in prices is prevalent in the great competitive markets for farm products.

Yet competition exists where prices are not uniform. There is competition where the lack of uniformity in prices is justified or explained by differences in the terms of trading agreements rather than by the nature of the commodity itself. Thus, one seller sells for cash only, while another in the same market grants credit. There is competition also between differently priced articles which are intended for the same use but which differ in quality. For instance, pianos which are of different appearance and tone-producing power are considered by the same purchaser and therefore are in competition with each other. Competition exists between sellers who offer entirely different commodities, provided the one is in some way a substitute for the other. Producers of cotton textiles compete with manufacturers of silk fabrics. In fact, this

force goes so far as to compel an adjustment of prices between articles that are absolutely different but which serve wants which are alternatives in the consumer's mind. The bond salesman may find himself in competition with the dealer in automobiles.

DEMAND

When wants exist only in the mind of some individual, they do not concern the market. When they are expressed as an intention to buy, they become demand. To be effective, the expression of intention to buy must be accompanied by evidence of ability to pay. The word "demand" is used in the singular to indicate the intention of any one person or of several persons considered collectively. The measure of demand is to be found in the relation of the quantity of the goods which the buyers propose to take to the prices they are willing to pay. Thus, we may speak of the demand for a thousand units of some commodity at a particular price. Since people do not buy regardless of price, a statement would be incomplete which referred to a quantity of goods alone as an indication of the strength of demand.

POTENTIAL AND REALIZED DEMAND

The intention to buy is conditional, in that it depends upon the possibility of a satisfactory agreement with the seller. In an extensive market there is generally a very considerable potential, or possible, demand which develops to the point of the attempt to purchase only when the price of the market meets the approval of the prospective purchasers. Potential demand, therefore, is to be distinguished from realized market demand. The one is of the nature of a project which may be carried out or not as circumstances may determine. The other is an accomplished fact. They both conform to our definition of demand in that they involve the intention of a consumer or other buyer to make a purchase, but the first awaits the fulfillment, or the ascertainment at least, of certain conditions, while the other has attained finality and is expressed, not only as an intention, but also either as a request for goods or as consent to a purchase.

The various possible purchasers in the market, in practically every instance, differ among themselves as to the strength of their

individual demands and as to the price at which they are willing to buy. In the first place, their desires for any particular commodity are of a considerable range of intensity. This is due, as we have seen, to the fact that their wants are not equally urgent to begin with and that they have been satisfied in different degrees. Secondly, the demanders are not in absolute, even if in approximate, agreement as to the utility of the goods under consideration and as to their usefulness in application to the respective wants of the demanders. The circumstances controlling personal valuations are so much at variance that no perfect uniformity in the elements of potential demand is to be expected. Furthermore, these valuations are made in terms of money which itself is not of the same importance to all people. By means of a comparison with money, the consumer may establish a satisfactory scale of values upon the basis of which to arrange his order of consumption, since all values and all costs in terms of money have each a single significance to any one individual. But among many individuals, this basis of measurement has no uniformity of meaning, and, other things being equal, there are differences in personal valuations and in the willingness of the potential demanders to buy, because of differences in their conceptions of the importance of money.

The fact is the same, and the statement only slightly different, if this last point is considered from the standpoint of costs. Money is not acquired in the same way and with the same ease by all buyers. It may have been gained by one with great effort on his part, and the expenditure of it may seem to him to be warranted only if the returns are relatively great and sufficient to compensate him for the cost of earning the money. It may have come easily to another and he may be willing to spend it much more freely. Goods at any price represent a higher cost to one than to the other. The poor, who have little, feel the sacrifice of an expenditure which would be an item of no consequence to the rich with their greater resources. Since values and costs are both related to the same standard, it is of the same effect to say that one regards the value of goods relatively low in terms of money or that he considers the cost high. It is one fact bearing upon the differences that are to be found in the elements of a potential market demand.

The extent to which potential demand will be converted into

realized demand depends, for the reasons given, upon the price at which purchases may actually be made. This statement does not mean simply that the price determines which of the various prospective purchasers will become buyers in fact, though it does involve that, but rather that the price fixes the total quantity which will be demanded of the sellers. Thus, the realized demand will be comparatively great when the price at which goods are offered is low, and it will be comparatively small when price is high.

If high prices were acceptable only to one group and low prices only to another, there might be a considerable difference in the quantities sold under different prices because the two groups were differently constituted and were of different sizes. But demand does not respond to price in exactly this way, and the principle stated is to be otherwise explained. The high prices are acceptable to a limited number, but the low prices attract the demand of these few and all others as well. When price is at the very highest point, it causes the withholding of all demand except that of those who value the goods highly and who have exceptional ability to pay, and price must be lower if it is to attract the demand of those who have less desire for the goods and little means; but if price is lower, it will lead to purchases by both these groups. In this lies the explanation of the fact that demand varies inversely with prices, as stated in the last sentence of the preceding paragraph.

However, low prices bring out an effective demand even more than proportionately greater than that which results from high price. This is due to the fact that most people so govern their consumption that no want is allowed to become very intense and also to the fact that there are more people in the lower income groups. A slight difference of price in the upper ranges has the effect, therefore, of increasing or decreasing the demand very little, since only those of urgent wants and high incomes are affected by it, and there are few of these. But in the lower ranges, every variation of price is of consequence to many people; and if price were changing, with each downward movement there would be an addition to the demand greater than that effected by any previous reduction. Among the possible purchasers are many also who, though willing to accept comparatively high rates, will buy in greater quantities if the cost is less. For these reasons, the demand which responds to any low price is, generally speaking,

not only greater than that which responds to high price but more than proportionately so.

THE DEMAND CURVE

The explanation of demand, as far as we have carried it, may be summarized with the aid of the graph (Figure 5), which may be assumed to represent an actual experiment in the market. When goods were offered at the price $5x$ it was found that quantity 1 was taken; when offered at the price $3x$, the demand was for quantity $2\frac{1}{2}$; with a lowering of price to $1x$, the amount purchased was quantity 8. Every possible price is indicated on the graph by the letter x and its coefficients, and the quantities that may be demanded, by multiples of Q. The relation of the price to the quantity is expressed by the curve, which indicates thus the nature of the potential demand in a particular market and the various possibilities in the realization of demand. One may ascertain from

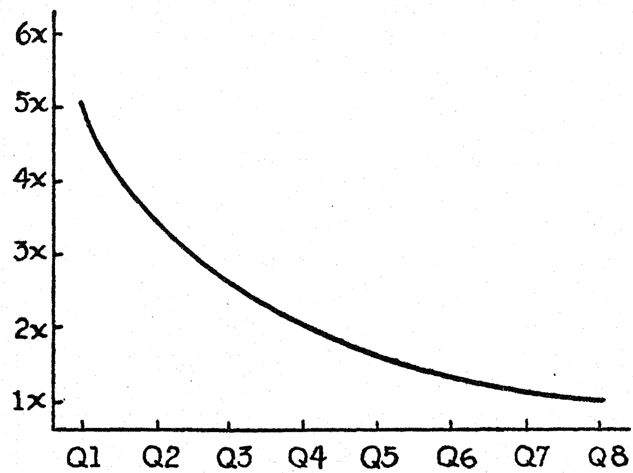


Figure 5: Demand.

the graph what the purchasers contemplate and expect of the market and how much would be demanded at any one of the several possible prices.

The graph is a picture of the market at a given instant. It does not attempt to show what the effect would be of a growing or changing demand. It does not disclose what would happen if

prices were shifted from one point to another under changing circumstances. It is primarily an indication of the various possible results in demand which might develop in a market at any given time if any one of several prices were to prevail there.

If there is a potential demand of considerable range, there are some who find prices too high, others who would be willing to pay more than is required if it were necessary, and still others, intermediately, who find the price at the exact point of their maximum calculation. The latter are those who would not have accepted a higher price but are, nevertheless, to be included in the realized demand. They are the marginal purchasers, so called because they are the ones barely persuaded to buy and least securely included within the actual demand. In a figurative sense, they are at the outer edge, or margin, of the group of buyers. Those whose valuations are lower or whose ability to pay is less are below these and do not become a part of the realized demand at all. The marginal buyer or the several marginal purchasers are the ones who find the price corresponding accurately to their full personal valuations of the goods. In their cases only is the price exactly equal to personal valuation.

Realized or actual demand is to be found on the graph simply by taking one of the possible prices as the actual market price and discovering what quantity is demanded at that figure. Supposedly, the demand actually realized should be very accurately calculated in this way. As a matter of fact, the potential demanders are largely people intent upon making a purchase, and they are not inclined to withdraw from a market with every trivial variation in its prevailing prices. Not all have settled positively upon a maximum price, and they do not all adhere to the valuations with which they entered the market. We say, therefore, that the realized demand only *tends* to come to the point indicated on the graph.

The curve of potential demand which we have drawn is based on an assumption of extreme conditions in another particular which are seldom to be found in fact. There is not commonly so great a range among the potential demanders as the curve suggests. Those whom we have represented as being willing to pay the high prices are too familiar with the market to be convinced of any necessity for doing so. They do not enter the market with any expectation of paying prices so far beyond the median rates.

The long curve might show what would happen in a very extreme case when these people were pushed by unusual circumstances to submit to extremely high prices. Those who are represented as low in the demand are in fact not in the market at all. They also are familiar with the market and know of the great probability that price will not be within the range of their ability to pay. The actual market curve, therefore, is a very short one. The several possible buyers are more nearly in harmony than those of our illustration. There is every probability that even the entire group of potential demanders will be included in the realized demand in many a market—first, because of this uniformity among them and, secondly, because of the fact that they yield somewhat in their tentative estimates of the market and buy at prices somewhat different from their original expectations.

ELASTIC AND INELASTIC DEMAND

Demand in a certain market does not respond to variations in price to the extent that our general statement of tendencies seems to imply. In some instances there is not a very great difference in the amounts that will be purchased at high and low prices respectively, while in others the position of price is very important in determining how great the actual demand will be. The foregoing statement introduces the idea of elasticity of demand. In one market the quantity purchased is just about the same regardless of price; and this unresponsiveness in demand is denominated inelasticity. In other markets the prevailing price is so largely controlling, and demand, therefore, so responsive, that the latter may be said to be very elastic.

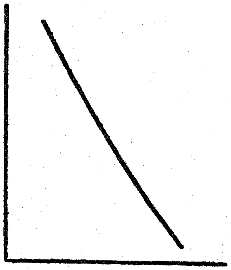


Figure 6:
Inelastic demand.

There are some commodities which everyone must have to maintain life, or for which desire has become very intense. No matter how high the price of these things may be in a given market, nearly every one in the community will buy some quantity. A lower price in the market would therefore be ineffective to bring out a much larger demand. There is no great body of submarginal demanders to be induced to buy. An illustration is to be found

in the market for fuel. Fuel is a necessity. Furthermore—an important point—there are few substitutes for it which are practically available to the ordinary purchaser. The highest price can have little more effect than to cause economy where there is probably already little waste. The cheapness of fuel in the market will not very greatly stimulate the demand. Some governments have long recognized this fact of inelasticity and have levied taxes on certain commodities, knowing the increased burden on the consumer would not greatly discourage consumption and that the tax, therefore, would be very productive as a source of revenue. The demand for luxuries, on the other hand, is in general comparatively elastic. There are more likely to be substitutes or alternatives than is the case with necessities, and the desire itself is not often so imperative.

Elasticity is a quality of an actually existing potential demand. It is simply the responsiveness of demand to price, and it is a reality in a market where prices are not subject to much variation. Elasticity is a quality of demand to be discovered more easily, however, in a market where prices are changing, since there it is possible to observe the extent to which variations in price increase or decrease purchases and sales. On the other hand, in such a market, changing prices may be accompanied by changes in the very nature of people's wants. As a seller reduces his prices, there may be increasing sales due either to the elasticity of the demand or to the appearance of new demand. If goods offered for sale, whether luxuries or not, are newly introduced or for other reason their utility has not come to be well known and firmly established in the minds of customers, the demand may be expected to respond more quickly to price changes than would the demand for well-known goods. Low prices, in these cases, yield returns in increased sales when a high price, in all probability, would cause the prompt rejection of the article. Thus, the low price of certain automobiles at a time when automobiles were regarded as a novelty and a luxury was very effective in creating a great actual demand among those who had been only remotely, if at all, potential demanders in that market. The results, no doubt, were due in part to elasticity in the initial demand, but very largely also to the constant creation of new demand. More perfect illustrations of elasticity are to be found, therefore, in those commodities for which there is an established want in the minds of most people but which

many will buy only when prices are most favorable. There is such elasticity in the demand for a certain number of articles of food.

Elasticity of demand depends on the general well-being of the community as well as upon the elements of a given market situation. When all are well-to-do and able to purchase everything desired, a greater proportion of the demanders disregard the expensiveness of commodities. Merchants who cater to the so-called high-class trade in any community emphasize quality. If the market is composed largely of people of low incomes, the merchants will attract them by price reductions and close calculations of price in all cases. If the community is composed of people of all sorts and in all economic conditions and these enter the same markets, the tendency toward an adjustment of realized demand to price will appear in the markets for many commodities.

In this topic the influences determining demand have simply been restated in slightly different terms than before in showing how these influences may be combined with various results in the demand curve. Between that most perfectly elastic potential demand and that demand so inelastic as to be almost unresponsive to price, there is every conceivable variation. We illustrate demand ordinarily by a median curve, but it is not to be supposed that demand throughout all the markets of the world invariably, or even usually, conforms exactly to the conditions it sets forth.

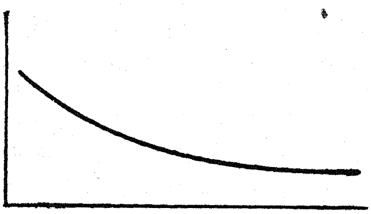


Figure 7: Elastic demand.

EXTREME ELASTICITY

The demand curves thus far given are sufficient to show the great majority of the potential demands with which the market needs to concern itself. People are influenced, however, by exceptional considerations in certain markets. Among these considerations are some that make for an extreme elasticity. There are certain customary prices which are so fixed in the consumer's mind that he will not readily consider any variations from them. Convenient prices are regarded in much the same way. When

people have been accustomed, and find it convenient, to pay 5 cents as a street car fare or for the purchase of some small article of frequent use, they resist a different price in a way not explained by the ordinary elasticity and inelasticity curves. When prices are much above the ordinary in these peculiar instances, they may have the effect of shutting off demand almost entirely. Such a development is likely to take place where any price is found unexpectedly high, even though the price is not so high as to embarrass the potential demanders and the good is one for which there is ordinarily an inelastic demand. Resentment at an increase which seems to be without cause may be sufficient to reduce demand for the time being. The height of a price in such a situation is not so important as the fact that it stands unexpectedly above its previous position. The instances of extreme elasticity are very few, of course.

On the other hand, if the consumers find price extraordinarily low in the cases to which we have just referred, they are not inclined greatly to increase their purchases. All potential demanders, probably, have acquiesced in the original price, and there may be none at all to be attracted by the lower figure. This would be true particularly if there were a market in which every potential buyer had become a purchaser of the good or service in question. At this point our illustrations become instances of inelastic demand, and hence they only imperfectly serve the present purpose.

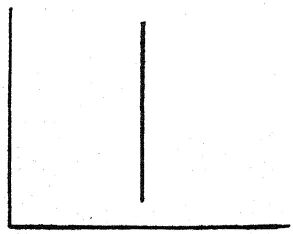


Figure 8: Fixed demand.

EXTREME INELASTICITY; FIXED DEMAND

When people are under very great pressure to purchase certain goods and when in addition these goods do not have utilities that tempt consumers to make use of them beyond their absolute needs, there may be such extreme inelasticity as amounts to a fixed demand which will not change in response to changing prices. Salt, probably, is a commodity for which there is such fixed demand in the market of any one time. There is also such a thing as external interference with demand through regulation by the govern-

ment or through some similar control of the consumer. In these situations, the quantity that may be demanded is so subject to arbitrary control that the variation which is characteristic of potential demand is largely or entirely absent.

REVERSAL OF THE DEMAND CURVE

When among the potential demanders high price itself is the index of value, or where demand for any reason is based upon high price, we may have a complete reversal of the curve which ordinarily represents the tendency of demand in the market. There are those who desire goods which are beyond the reach of ordinary purchasers and to whom certain goods lose their desirability when they become common. There are generally only a few such people and they do not greatly affect the market. Still, in a market confined for the time to such a group, as where goods are prepared for, and sold only to, the rich and at prices which are beyond the reach of the ordinary consumer, the demand for these goods would decline with decreases of price. The first curve in Figure 9 illustrates this vanity demand. Nevertheless, generally, price reduction brings the good within the reach of buyers of another sort, and the curve for the market as a whole corresponds to the second or the third of those shown in the figure. The increase in the one demand offsets the decline in the other.

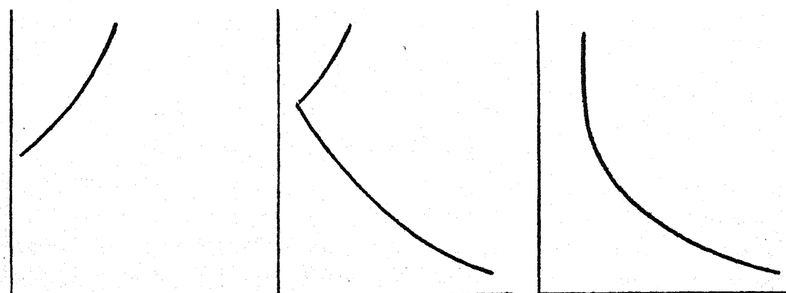


Figure 9: Reversal of the demand curve.

The peculiarity of a certain element of demand to which we have just given attention reveals the fact that in any one market the potential demanders may be separated into classes or groups ac-

cording to their attitudes toward prices and their ability to pay. In one part of the demand, there would be considerable elasticity; in another part, the reverse. If the groups could be separated into individual markets, it would be possible to charge one group a high price and another a low price. The demanders are so generally in communication with each other, however, that the development of a class price such as this is possible only where some differentiation in the commodity can be made to prevent exact comparison or to afford a justification for the difference in price.

JOINT DEMAND AND INTERDEPENDENT DEMANDS

All those goods and services which are the subject of joint valuation and which are bought with other goods at a single price are subject to joint demand. There is no demand for the one except as it is offered for sale in combination with the other, and what might otherwise be two separate demands is to be expressed by a single curve. It is a distinctly different situation in which two goods which are to be used together are bought in separate markets and each at its own price. It may be that neither will be purchased except as it is found possible to purchase the other also at a satisfactory rate, but the two demands are expressed separately.

Sugar is required in greater quantities during the season when fruit is available for canning. If the price of fruit is low, it will mean greater purchases in that market, and these purchases will result in an increased demand for sugar. The outcome may be that peculiar situation in which the demand for sugar is higher at a time when price is high than it is at other times when price is low. This is a response to price which is unexpected in view of the general tendency of demand. It is not a reversal, however, of the demand curve. We are describing demand as it exists in a given market at one time only. It remains true that the demand for sugar, even in this situation, is greater if the price is relatively low than it is if the price is high. There is an interaction of two market demands rather than a new tendency in the demand in either one of the markets. There are two related demands, and the amount which is bought in either market depends, in part, upon the purchaser's decision to buy in the other.

MONOPOLY OF DEMAND

One may be said to have a monopoly of demand if he is the sole buyer in a given market. It is in such a situation that there is the most absolute monopoly. It is sufficient, however, if the demand of a single buyer is so great a part of the total that he is able to exercise a practical control of the amount that will constitute the realized demand in the market. He may exercise such control by withholding his purchases or extending the amounts he will attempt to buy as his own interests seem to dictate. Monopoly gives him the power to fix the demand regardless of the prevailing prices and, presumably, to compel a readjustment in those prices. As we shall see, there are limits to this power, but the point of importance here is that demand under conditions of monopoly does not develop the same adjustment to various prices as it does when there are several demanders each responding differently to market rates. It is to be noted, however, that the monopolist does respond to the possibilities of price as do other demanders. He is no more willing to buy goods at high price than is the average consumer, and it is the only advantage of monopoly that one is able to force such competition among the sellers as will result in the reduction of price.

It does not often happen that an individual consumer has control of an entire demand, but there are instances of the exercise of monopoly power by buyers among the producers. A local canning factory which alone takes the product of nearby farmers who are engaged in the business of supplying an article such as sweet corn solely to the one factory does, of course, have a monopoly of the demand for that particular product.

CHANGE IN DEMAND

It is well to keep in mind the distinction between those causes which operate to convert potential into realized demand and those which may change the very character of demand from time to time. We know that new wants arise, that new utility is developed in various commodities, and that the population by its very growth may cause a change in the quantity of goods which will be demanded at any one of the several possible prices. Such causes as these change the strength of demand without neces-

sarily changing its general tendency. If the demand for some commodity has decreased in its general strength, because of a change of fashions or the appearance of a substitute, the result is that smaller quantities are demanded at the several prices throughout the entire range of the potential demand.

These changes in the strength of demand may be indicated by dotted lines on the graph (Figure 10). Whereas at one time quantity 4 was demanded at price $3x$, a change in the strength of demand has caused quantity 2½ to be required at the same price. If demand had changed in the other direction, the quantity demanded might have been quantity 6. The dotted lines show a general increase of demand or a general decrease, but they do not show the demand to be more or less elastic or to respond in any different manner in the later market than in the former. The different prices simply have a different result at a later date. The lines on the graph do not indicate any change of price in itself; they indicate a different attitude on the part of the consumer, showing that he is now willing to pay more or less than formerly, or that more people or fewer are found ready to buy at any one price, with the result that the quantities demanded are uniformly greater or less than before.

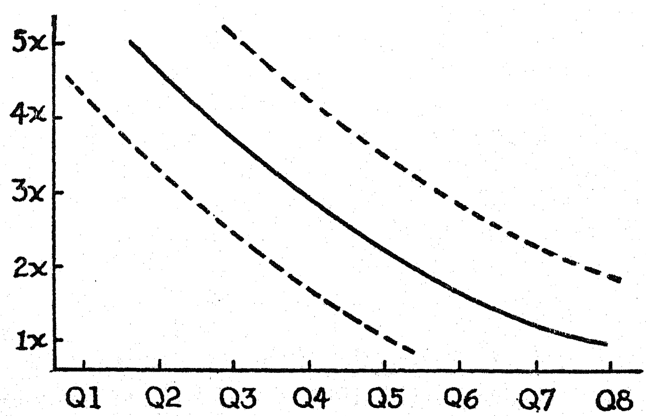


Figure 10: Change in demand.

The changes, however, may be accomplished by a greater elasticity or inelasticity in demand, and the new demand curves in that event do not take exactly the same direction as the old. (Figure 11.) Automobiles which once were a luxury and were

sold to a very elastic demand were later sold at very different prices to a greatly strengthened demand and one which had become much less responsive to slight differences in market rates. People were not induced to purchase at the later date altogether on the "price argument."

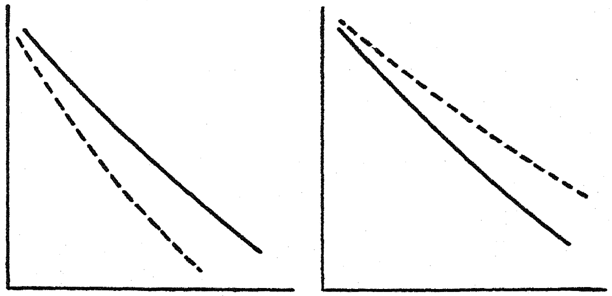


Figure 11: Change in demand.

XI

MARKET SUPPLY

Potential and realized supply. The supplier's calculation. The supply curve. Elasticity of supply. Fixed supply. Monopoly of supply. Circumstances favoring monopoly of supply. Joint supply and interdependent supplies. Changing conditions of supply. Supply and the tendency toward increasing costs. Supply and the tendency toward decreasing costs.

Goods which are intended for present sale constitute market supply. Two classes of goods are excluded by this definition from the category of supply. Those goods which are in the hands of consumers or are being put to their final use by producers are of consequence chiefly in their effect upon demand rather than upon supply. They have a bearing upon the extent to which the requirements of producers and consumers are to be met by purchases rather than by goods already on hand. Those goods, in the second place, which are designed for sale and which are ultimately to be brought into the market but which are not offered to the purchasers of the immediate market are likewise only indirectly of consequence in the trading of the present. They have an effect upon later markets and constitute a resource of supply, but they are not a part of market supply itself. The productive output is created so largely in anticipation of the opportunities of selling in the future that even the resources of supply are affected by the prospect of favorable market conditions, but goods are not to be regarded as a part of supply, in the technical sense in which we are to use the word, unless the owner has an immediate purpose of selling them. Supply is not the total quantity of a particular commodity that is known to exist. Only those goods are factors in the present market which the seller has an active desire and intention to sell in that market and which are available for delivery in fulfillment of trade agreements.

POTENTIAL AND REALIZED SUPPLY

The goods which are actually factors in the market are at the outset only a potential supply. The intention to sell is condi-

tioned, as is the intention of the demander to buy, upon the possibility of effecting a satisfactory agreement. The possibility of agreement, or, specifically, the price at which the goods can be sold in a given market, determines how much of the potential supply is actually to be offered in trade to prospective purchasers. At the opportunity for sale at a favorable price, a part of the potential supply becomes an active or realized market supply. A part of the realized supply is then taken in trade by purchasers who find themselves in agreement with the market rates at which the goods are presented for sale. In the parts which they play in the market, goods are to be distinguished, therefore, first, as they constitute a resource of supply which has no direct influence upon the market of the day; secondly, as they are an element of the potential supply which may or may not be presented for sale; thirdly, as they are offered to the buyer in trade, thus constituting a realized supply; and, finally, as they are actually purchased in trade and become delivered goods.

The seller in most markets has every inclination to push the sale of his goods; consequently, there are comparatively few potential suppliers who simply await a favorable turn in the attitude of the demanders. The result is that nearly all the potential supply is actually offered for sale and becomes in fact a realized supply. In this respect, supply differs from demand. Those who sell goods are likely to be under an almost absolute necessity of selling at some time or other and are quite generally busy with their attempts to sell; but those who buy enter the market, in most instances, under no such compulsion and with no such incentive to persistence. The sale of goods which are prepared for the market, as most goods are nowadays, may be delayed or postponed, but sooner or later the goods must be offered at some price. On the other hand, except as buyers are producers who happen to be in great need of some particular raw material or article of equipment, they may forego a projected purchase altogether. There are many potential demanders, in fact, who do not come at all to the point of agreeing to purchase; for the demanders, for the most part, are consumers and merchants who have many alternatives and who may withdraw from any one market at will. There is, consequently, as we have stated, a closer correspondence between total potential and realized supply than there is between potential and realized demand.

In a second comparison between demand and supply, we find the situations reversed. Most of the realized demand results in actual trade, since the potential demanders in most markets generally await an acceptable proposition from the seller before attempting to complete a purchase. Even those proposals to trade which are made by the demander are made commonly under such circumstances, likewise, as practically to insure their acceptability to the seller and to result in a sale. But realized supply is not so generally equivalent to actual sales, for the seller, who takes the initiative in the ordinary market, proposes transactions with much less success than does the buyer. Goods, therefore, which are more than a mere potential supply and which are actually offered and even urged upon the buyers are carried over from the market of one time to that of another before they are finally disposed of.

THE SUPPLIER'S CALCULATION

Since the supplier has no other use for his goods than to dispose of them on the market, it may seem at first thought that he has no choice but to sell them at any price that he can get. However, he is not entirely without alternatives. As has been suggested, the seller, as well as the buyer, may refuse to trade, for he may store and hold his product, divert it to other markets, and ultimately, though a matter of no consequence in the present market, he may turn his productive efforts to other purposes. There is therefore, the possibility of the existence of a potential supply which will not be brought into activity in a given market and the possibility of an adjustment of supply in the course of time to the state of the market.

In his calculation of a favorable market situation, the producer, or seller, is concerned primarily with the possibility of disposing of his goods at a price which will result in an adequate reward for his productive activity and, secondly, with the opportunity for gain beyond the minimum necessary return. He is inclined to offer his goods for sale whenever conditions are so favorable as to make certain a satisfactory return from the transaction of trade provided no greater return is to be expected. The sellers of the various parts of the supply, of course, have different attitudes toward the question of an acceptable market rate. They are all anxious to sell at the highest possible price and unwilling to sell at any rate

less than that which conditions actually make necessary, but they differ in their estimates of what constitutes the maximum available return under given market conditions and in the important point also of the minimum at which they can afford to sell.

Sellers may make use of their experience with the market and their knowledge of prevailing market rates as a basis for the estimation of the highest price likely to be effective in the market; but in determining the minimum rate at which they can afford to sell their goods, they are compelled to rely upon their costs of production. The minimum rate acceptable to the seller in consideration of the costs of production is to be related in thought to the buyer's maximum, which is based supposedly upon the value of the goods. Generally speaking, the supplier is willing to sell, if necessary, at a return which clearly covers his costs, though, of course, as we have said, he sets his price in contemplation of as great a return from the transaction of sale as may be possible in consideration of all market conditions. The buyer, similarly, is willing to pay, if necessary, an amount equal to the value of the goods to him, though he actually pays as much less as circumstances permit.

It is true that sometimes the seller may consider the possibility of using his supplies himself, and he has then an additional basis upon which to estimate the minimum return he should receive. Under such circumstances, he consents to a sale only when the price at which the goods must be offered is high enough to cover, not only his costs, but also the value of the goods to himself personally. Since production is commonly for the market only, such considerations are of very little practical importance in their effects upon the market. Potential supply becomes realized supply in response to the prospect to favorable prices, and prices are found to be acceptable to the suppliers to the extent that they cover the costs of the supply and yield as much over and above costs as the circumstances controlling the sale of the goods seem to make possible.

Supply is not affected by differing conceptions of the importance of money in the minds of the sellers to the same extent and in the same way that demand is affected by similar differences among buyers. The latter, both in their valuations of goods and in their comparisons of goods with purchasing costs, are dealing with intangible satisfactions in their relation to money, and, consequently, demand is governed in part by variations in personal estimates of both of the two elements. The seller has a simpler calculation to

make when he comes to deciding upon a price that will be satisfactory to himself as a seller. His receipts from the sale of his goods are to be in the same form as his costs, and the two are directly comparable. The difference between them may be computed mathematically, and the ratio between them may be expressed as a percentage of either. He has, therefore, practically only one element to measure, and the relation between any price and particular costs is of the same significance to all sellers. In the impersonal calculations of producers, a price which equals cost or yields a 10% margin over costs is of one meaning to all whether or not they differ in their valuations of money; for if money is exceptionally important to one, it is equally so as income and as outgo. It is sufficient, therefore, that the market price bears a proper relation to the seller's costs. Supply at a given price is affected by these costs themselves but not to any appreciable extent by peculiarities in the seller's attitude toward the money in terms of which they are expressed.

THE SUPPLY CURVE

The market supply is in the hands of sellers whose costs are by no means uniform. Some producers are well supplied with land and capital, are well located for producing and selling, and have the best organization and management. Others are contending against every difficulty that would make for higher costs of production. These statements are true alike of firms operating respectively under the tendencies of increasing, decreasing, and constant costs; for no matter how costs may change with expanding markets, the several producers appearing in the market at any given time are unlikely to have attained the same cost levels. Since those who produce with the least cost will be willing to sell at high prices as well as at a comparatively low return, while those with less favorable costs are able to sell only when the compensation is sufficient to reward them for their greater outlays, supply may be expected to respond only in small quantities to the prospect of sales at low prices and in large quantities whenever high prices are possible. All the various suppliers are enabled to sell when the prices are high enough to cover the expenditures of producers operating under the highest cost, but only a part of the potential supply can be offered when prices are so low as to yield a return

only to the few suppliers who are enjoying the greatest advantages.

The trend of the curve illustrating the nature of the potential supply is the reverse of that which illustrates the nature of demand. The accompanying graph (Figure 12) represents the conditions in a market in which a single commodity is offered for sale and in which only one brief period of time is under consideration.

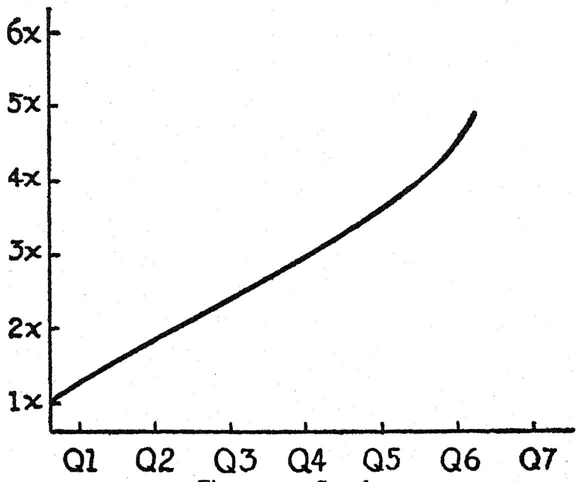


Figure 12: Supply.

If the price $4x$ prevails in the market, quantity $5\frac{1}{2}$ will be offered for sale. This is because the comparatively high price covers the cost at which a considerable part of the supply is produced and is a price also which meets the expectations of the suppliers. At the price $3x$ the amount presented to the buyers is only quantity 4. If the only possible price were as low as $1x$, no goods at all would be available, since that price is not sufficient to cover the costs of the most efficient producers among the potential suppliers. The relation of the amount of goods offered for sale to effective prices is indicated by this curve of potential supply. The curve illustrates the tendency for a large supply to respond when conditions favor high prices, and the corresponding response of small supply in situations which permit only low prices. The graph does not attempt to present the effect of changing conditions, but serves only to show the relation of supply to given prices at any one time.

Since the suppliers differ as to their costs, there are, inevitably,

in a market of any considerable size, some whose costs are barely covered by the prevailing market prices. There are others who gain a slight margin over costs and still others whose returns are very much greater than would be necessary to induce them to sell under less favorable conditions. The first mentioned of these are marginal suppliers. They are the ones whose costs are highest among those who actually offer their goods for sale. Obviously, they could not afford to sell if prices were lower or if their costs were higher. They are the ones barely persuaded to sell, and the ones, therefore, said to occupy the marginal position.

As a means of emphasizing certain essential facts in connection with supply, we have produced a curve not in perfect conformity with conditions in the average market in the brief period to which the curve is intended to relate. The graph suggests the possibility of variations in supply which are in fact to be expected only in the developments of long periods. There is not any such great latitude in potential supply in the present market as the curve in Figure 12 seems to indicate. In the first place, many sellers may be unconvinced of any practical necessity for trading their goods at the lowest prices that their costs of production would permit. Under certain conditions, as, for instance, if the sellers were under great pressure to turn their goods into cash, they might sell at the minimum; but, in the ordinary market, the low-cost producers, as well as others, intend to sell only at rates which are as high as those which have generally prevailed in the market or which may appear to be within the range of present possibility. As a result, the supply curve has a shorter downward range than would otherwise be the case. On the other hand, conditions favoring high prices are ineffective to cause a very great increase of supply because producers who might have added to the available quantities, at a higher cost than prevails among the majority, have been discouraged from attempting to do so by the previously poor prospect of profitable sale, due to the prevailing rates of past markets. If prevailing prices have not been sufficient to cover their costs, many potential suppliers of earlier markets will have disappeared from the field entirely. When price is high enough to cover the requirements of the many suppliers of a given market, therefore, every element of the potential supply is placed at the disposal of purchasers, and a higher price cannot bring out a greater supply. Only with the lapse of time and the development of a new market

situation could the latter occur. The curve should be a comparatively short one, showing that those expecting to sell in the immediate market are responsive to a slight range of price possibilities and that the quantities which are available for sale are strictly limited.

ELASTICITY OF SUPPLY

While the supply curve has been constructed on the assumption that the costs of the several suppliers differ, it is not to be supposed that the divergence between the extremes is equally wide in every market. On the contrary, there is ideally possible a condition of absolutely uniform costs for all the producers. In this situation, a very low price might mean loss for every one, and the result would be that the entire supply would be withheld. An extremely high price would mean great profits for all alike and would bring the entire potential supply into the actual market. A supply such as this is an elastic supply because it is greatly affected by differences in the prevailing market rates, and it responds very promptly to variations in market prices. Each slight change in the market opportunity causes a very great change in the realized supply.

An illustration of a situation approaching this in a measure is to be found in the local market for cotton in an area where all the farmers produce under about the same conditions. They use farms of similar size, operate with the same amount of equipment, and get their land and capital at the same rates. If the price of cotton were very low, every cotton farmer would be indisposed to sell and, if able to hold out, would await a better figure. If the price were very high, all the available cotton would appear for sale. Of course, costs are not the only determining element in this elasticity. Sellers are calculating market possibilities, and how promptly they will respond will depend on their own attitudes toward sales. Furthermore, the very necessity under which the cotton farmer may be to turn his crop into cash or provisions may control his attitude toward supply in the same way that the necessity of consuming affects the elasticity of the potential demand. These are causes reducing elasticity and preventing its extreme development even where costs are absolutely uniform.

In other circumstances, not easily found in the extreme form in which we describe them, costs are so divergent as to give us a very

inelastic supply. In such a market, a very slight difference in price is not effective to bring out a great addition to the quantities offered for sale. The higher price serves to reach only one, or a very few, additional producers; and, since the costs of the remaining producers are very much larger than those of the marginal supplier, there is necessary a very great difference in price to cause any results at all in the increase of supply. Likewise, it would be an extremely low price which would eliminate any considerable part of the supply. The low-cost man in the market is very much lower than those above him and can stand a price reduction of some consequence before he will be so affected as to need to withdraw. Inelastic supply is supply which, for these or any other reasons, responds only slightly to great differences in price.

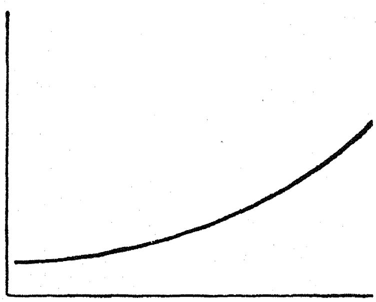


Figure 13:
Elastic supply.

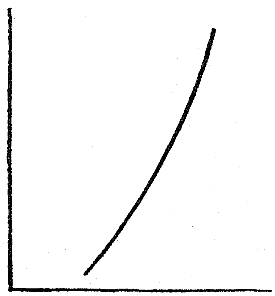


Figure 14:
Inelastic supply.

Elasticity and inelasticity of supply may be illustrated by the graphs. The curve in Figure 13 shows that there is to be expected a great variation in realized supply with only slight variations in prevailing prices. The curve in Figure 14 extends over a very small variation in quantity but a considerable range of price possibilities, and indicates that no very great difference in the supply of goods offered in the market is likely to result from such changes in prices as would cause considerable variation in other markets.

FIXED SUPPLY

The very extreme of inelasticity is an absolutely fixed market supply. In a market where such a condition of supply exists, all sellers are willing to dispose of their goods at such rates as may

happen to be prevailing and at prices as low as may be necessary to effect a sale. The quantities to be offered in trade in such circumstances are not responsive to variations in prevailing prices and the realized supply is the entire potential supply. In other words, the supply offered for sale is exactly the same regardless of price.

It often happens that perishable goods reach the point where further storage and transportation means deterioration and loss. The dealer in such commodities may then find it advisable to offer them in the market even at prices that he would consider very unsatisfactory under other conditions. So far as he is concerned, supply is fixed. If others not under the same pressure are able to withdraw from, and reenter, the market at will, the supply is variable; but if all are under the same necessity of selling, the entire market supply is fixed, and all will sell at whatever price is found to be effective. Thus, if all the merchants of a city who have acquired a supply of peaches for home canning find it necessary to dispose of them quickly in order to avoid the loss of the goods, the quantity to be offered for trade is so fixed as to be unaffected by the costs of the producer or seller or the low return to be expected from the sale.

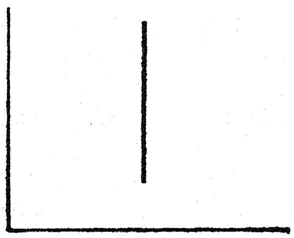


Figure 15: Fixed supply.

The illustration just given suggests that fixed supplies are generally so large as to require their sale at a sacrifice. Such supplies are long supplies; and low prices are necessary to attract purchasers in numbers sufficient to take the quantities offered. This situation gives us what is called a "buyers' market," in which the buyer has the advantage. However, fixed supply occurs under other circumstances. There is such a thing as a "sellers' market" also. Sellers may have the advantage of selling at a time when supplies are relatively short. This is likely to be true when there are few sellers in the market, when the individual is attempting the sale of real estate or personal property which is distinctive in character, or when some unusual circumstance, such as a war, has disrupted production and curtailed supply. A very high price may be an effective one in such circumstances. The supply is a fixed supply whenever the quantity to be sold can neither be in-

creased nor decreased in response to the prospect of loss or gain in the market.

A partial fixity of supply is found in long supplies which cannot be decreased but which can be increased. Since the sale of that part of the potential supply which must be sold is to be made at comparatively unfavorable rates, suppliers who are able to hold out are not likely to offer their goods for sale at such a time. The cold storage men are not likely to bring eggs on the market by way of increasing supply at a time when the market is overloaded with eggs which must be sold at a sacrifice. Therefore, while there is the possibility of a variation of supply in one direction, it is of little practical effect. Likewise, among those who have control of a short supply which can in no way be increased, there may be some who are in a position to withdraw from the market. The supply, therefore, is capable of a variation downward and is only a partially fixed supply. However, sales are to be made at exceptionally favorable prices under these conditions, and no occasion arises for the withholding of any part of the supply. If there were a shortage of ice in extremely hot weather with resulting high prices, there would be no probability that any competitive supplier would withdraw from the market.

Any emergency requiring the prompt disposition of goods by an entire group of suppliers may result in fixed supply for a time, but it is unlikely that such a situation will develop frequently or become a permanent feature of any particular market. The normal causes governing supply make for some variability in its elements, and those who offer goods for sale generally are able to avoid such compulsion of circumstances as we have described.

MONOPOLY OF SUPPLY

When one supplier has in his hands the entire resource of supply, or so much of it, at least, that he is able to fix the amounts which will finally be delivered to the market for sale, he may be said to have a monopoly of supply. The monopolist is influenced by the same primary considerations as any other supplier. That is to say, he offers as great a supply as possible in a market when high prices prevail, because they afford him a certain and possibly unusual profit, but when the market will accept only very low prices and it may be impossible for him to enter the market at all

without loss, he is less responsive. On the other hand, the market supply, when monopolized, is not governed entirely by the prevailing market prices. It is fixed by the monopolist at whatever point seems to suit his interests. There is only one element in the monopolized resources of supply, and it is possible, presumably, so to limit the amount offered for sale that it may all be sold. The monopolist expects, by the control of the realized supply, to induce competition among the buyers, and if supply is actually restricted and consequently is relatively short, a profitable sale of the entire supply is to be expected.

What proportion of the supply it is necessary for a supplier to hold in order to exercise the power of a monopolist is a question of fact in the individual case. If others who hold some small portion of the total supply are allowed to dispose of their goods first, the monopolist who has only a partial but adequate control can add to the quantities which they offer just such an amount as will be required to fix the actual market supply at the point he desires. His goods are used in this way as an evener of the market, or as an adjuster of supply. Thus, if one seller had 80% of the total potential supply, by reducing his share or withholding a part of that which he might offer, he could so limit the aggregate amount sold that it would bring about the strongest competition among the potential purchasers. This fact has a double significance. Partial control may give monopoly, and those who gain monopoly by partial control are often able to hide behind the apparent, though only nominally effective, competition of other suppliers.

If there is permanent monopoly, the supplies which are to be offered in the market are generally predetermined by the very limitation of production itself. While the monopolist under such circumstances, if not offering a perishable, could withhold goods if he chose, he generally has previously so limited the supply that there is no occasion to do so; and therefore, under such monopoly conditions, the entire available supply of the commodity in question is actually offered for sale. In the temporary control of supply, which is monopoly as it very frequently occurs, there is no such opportunity for the restriction of production itself; the limitation of the quantity to be sold is accomplished only by the withholding of goods which otherwise would constitute a part of the potential supply. In either case, there is, in practical effect, a fixed supply and one artificially restricted.

CIRCUMSTANCES FAVORING MONOPOLY OF SUPPLY

The circumstances in which this artificial fixation of supply may take place are varied. There are few situations in which one could permanently control an entire supply of goods; but in any particular market, monopoly may develop temporarily as the outcome of any one of many causes. There may be some difficulty in discovering all the factors that have contributed to the creation and maintenance of control in a particular market. There are, however, certain factors and conditions of supply favoring the establishment and maintenance of monopoly which are so frequently observed that they may well be enumerated.

In the first place, natural conditions may make possible a monopoly, as when, for instance, a raw material is so limited in quantity or is of such narrow distribution that one person is able to acquire possession of the entire resource. A water power site or a plot of ground especially well adapted to some project of industrial or community development, if in the hands of one person, would constitute a monopoly based upon the limitations of natural resources. Occasionally, the very personal resources of some individual are of such a character as not easily to be duplicated, and, as a result, this person controls the supply of the peculiar service which he alone is able to offer. An artist of especial skill may sell his services without competition in his own field.

A second source of monopoly is the state and society itself. It is customary for governments to grant patents to those who have devised some commodity of individuality and distinctive use. Those to whom these patent rights are granted are protected by law from the competition of other sellers and have a very absolute control of the supply of the article in question. Very rarely, social favoritism itself may grant this peculiar power to one seller. That may occur where community loyalty is so great that one person finds himself, at least for a time, in a position to control the local supply of certain goods. The favoritism of those powerful in economic activity, such as transportation agencies or banks, may be great enough to establish one as sole producer of some one commodity or group of commodities.

In the third place, within the producer and his own organization, at times, there lies the power by which he may establish himself as sole producer. If he were to have discovered a process of

vulcanizing rubber and it were known to him alone, he might establish a monopoly by keeping the process secret. The monopoly would be almost beyond question if his process were so important in meeting the exact demand of the people that no other producer could supply an article comparable with his. Many so-called patented articles are produced, in fact, by secret processes and are not patented at all. It is possible, also, for the producer, by his very methods of selling and by virtue of his competitive advantages, ultimately to drive competitors out of his field. It by no means follows that these methods frequently result in monopoly, and they are seldom an adequate cause, but they may operate as aids to the attainment of complete control of supply, at least for a time.

A fourth group of causes exists in the nature of the costs attendant upon the production of certain commodities. There are some things to be produced only with a very large investment of capital. When the required investment is great, it may be unprofitable for more than one to enter upon the undertaking, and the costliness of competition may afford protection to one already in the field. In this way, the practical difficulty encountered in assembling a productive enterprise with adequate capital, the initial costs of the venture, and the risk of failure in a field already occupied, may operate as contributing causes of monopoly. The probability of monopoly is still greater if production is conducted under the tendency to decreasing costs. Then an established concern is able to meet a growing demand at a lower cost than could a new concern in its initial stages of development. As the first concern expands production, it is enabled to produce at a lower cost. A new concern would not be able to meet it in competition on prices until the new concern had expanded its production and sales to somewhat the same extent as the one originally in the field. Priority in the market is an aid to the development of monopoly power, therefore, if production is conducted under the tendency toward decreasing costs.

The market itself offers the fifth group of aids to monopoly. The market may be temporarily inaccessible to most suppliers, and in many an emergency the very difficulty of bringing in more goods gives someone a complete control of the market supply. Such control may be acquired without intention on the part of the seller and may be due entirely to the failure of the means of communication. Furthermore, only the most perfectly organized mar-

ket can be expected to maintain demand and supply in such adjustment that shortage in supply will not frequently occur. No market can do so under all circumstances.

Such factors as have been mentioned in the preceding paragraphs are only secondary or contributing causes of monopoly. The immediate cause lies in the desire of the seller to acquire control and exercise power for the sake of gain.

We have long been accustomed to make use of the expression "natural monopoly." Confusion is likely to occur in this connection from the fact that the expression seems to refer to those monopolies which arise out of the natural limitations of our resources of raw materials, while it seems also to apply to those monopolies which are so by reason, in part, of the very nature of the business. Thus, we sometimes speak of the street railway business as being a natural monopoly because it is affected by the tendency to decreasing costs, and because there is in certain circumstances, seemingly, a natural tendency toward monopoly in that business. In any event, the phrase ought not to be taken to imply that any one of the causes enumerated inevitably leads to monopoly or that a business of decreasing costs ought, as a matter of policy, invariably to have sole control of supply. Limited resources are often in the hands of many producers, and even those concerns which control a natural resource are generally compelled to enter a market in which their goods are put into competition with others of the same sort or so closely substituting that the monopoly amounts to nothing. There are a certain few cases in which it seems that the public interest would dictate a monopoly in a business of decreasing costs, but the great majority of concerns in this group are subject to as severe competition as is to be found anywhere.

In the paragraphs above, we have attempted a classification of some of the contributing aids to, or causes of, monopoly, but not a classification of the monopolies themselves. The monopoly which is established as a result of these or other causes may be classified as to its permanency, as to its scope, as to the importance of its presence in the market, or upon the basis of any other one of the several characteristics of monopoly as it actually exists. In any event, there is only one fact which distinguishes monopoly, actually achieved, from other conditions of supply, and that is that some one supplier, or a group of suppliers acting jointly, is able to control the available market supply. It is one and the same situa-

tion, no matter how it may have arisen, how long it may endure, or of what general importance it may be in its effects. Its economic aspects are the same fundamentally, if not practically, whether it involves the control of the supply of the most trivial novelty or the most important means of communication.

JOINT SUPPLY AND INTERDEPENDENT SUPPLIES

The various commodities which are demanded jointly by the consumer in a particular instance are supplied by the producer in a single market and are presented for sale at a price to cover the two commodities at once. The supply in such circumstances is joint supply. The various services and commodities provided by hotels, railways, and steamship lines are offered at one rate in many cases rather than at two or more separate rates. When goods are sold thus, the combination of units is the equivalent of one unit for market purposes, and the supply responds to the same causes and is governed by the same factors as is supply under other conditions. There are, however, certain goods which have been produced jointly, illustrations of which have been given in connection with the discussion of the costs of production, which are offered for sale in separate markets and which are to be taken by different buyers. Cotton and cottonseed are produced jointly, but they are sold to buyers widely separated in every sense of the word. These commodities do not constitute a joint supply and are not sold at a joint price.

The supplies which are offered in the two separate markets are not entirely independent of each other, however. One of the commodities may be produced and offered for sale simply because the producer finds the other one profitable. Consequently, supplies appear in many a market, not so much because their production and sale is profitable in itself alone, as because they constitute, as by-products, a source of income. The returns from their sale are so much gain to the original producer, though because they have been created at a joint cost with other goods, he does not know exactly what their cost of production was. The producer gains if the returns from the entire business are satisfactory, but he may be offering a supply in a particular market where he is not governed entirely by the considerations which are supposed to govern suppliers. This gives us the phenomenon of large quantities

of goods offered somewhat regardless of prevailing prices, or of a larger supply being offered at a lower price, at one time, than was offered at a high price another time.

There is a suggestion of fixed supply in the by-products of almost every industry which has by-products, for the supply of these things to be found in the market at any one time is dependent, not simply on the calculations of the suppliers of that particular market alone, but also upon previous incentives to production given in some other field or in another market, namely, in the field in which the principal product is produced and offered for sale. Thus, the by-products of the petroleum industry may be created and offered for sale somewhat regardless of the prices to be found in their own separate markets, for the supply of such commodities is not governed altogether by the prices which apply to them, but by influences in the market for gasoline.

CHANGING CONDITIONS OF SUPPLY

The preceding sections of this chapter have dealt with the nature of supply with the purpose, principally, of showing how supply may appear in one market alone and at a certain time only. We turn now to the explanation of those changes which occur in the market with the entrance of new conditions of supply or with variations in the prevailing price. There are two elements of change, therefore, of which we should take note.

In the present market there is one prevailing price to which supply responds in ways that have been indicated. In the course of time, another price may prevail in the same market. This may be within the space of a few days or less, or after the lapse of a year. If at that time the potential supply remains the same in character, that is to say, if the attitude of the suppliers is unchanged and their costs of production are not materially higher or lower, supply may be expected to respond to the new price requirements as it would have done in the earlier market. The curve of potential supply holds the same position in such case and shows the same trend. How great the change in the amount of goods actually offered for sale would be depends, as we have seen, upon the elasticity of the supply. If supplies are very elastic, a new price will have very little effect in changing the realized supply.

However, the very conditions of supply may change. That is to

say, the potential suppliers may enter the market in different numbers and offer goods at any one of the various possible prices in greater or smaller quantities than before. For instance, there may have developed a scarcity of raw materials out of which goods are manufactured. Under such circumstances, smaller quantities are likely to be offered on the market if former prices continue in effect. On the other hand, the producers may be favored by lower costs for land, labor, and capital. Greater resources of raw materials may be available, or better management may have so lowered costs in other ways that producers are able, either to offer greater quantities in the market than would have been possible before at any given price, or to accept a lower price for a supply of the same amount as that which was presented in the earlier market. The causes suggested, since they are factors determining the attitudes of the various potential suppliers, bring about a change in the condition of the market supply.

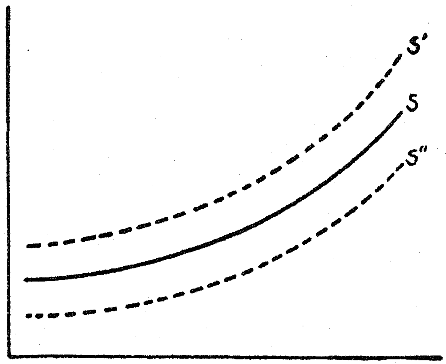


Figure 16: Change in supply.

To indicate upon the graph the fact of a change in the market, it is necessary to draw curves similar to the old but in new positions. The new curves may represent potential supplies in which there is the same difference between the quantities which will be offered for sale at the highest and at the lowest prices, and the trend of the curves may be the same; but the curves show a new relation between price and supply. In the accompanying graph (Figure 16), the curve s' indicates a supply that responds only to higher prices than formerly, while the curve s'' represents a situation in which greater quantities than before are to be had at any of the several possible prices or in which the same quantities may be had at a lower price. If supply changes also in the matter of its elasticity, the new supply curves take a different trend on the graph. They may show only a change of elasticity, or their positions may be the result of this change and also of a new quantita-

tive adjustment to prices as a whole. These situations are illustrated by the curves in Figure 17. The first and second curves in-

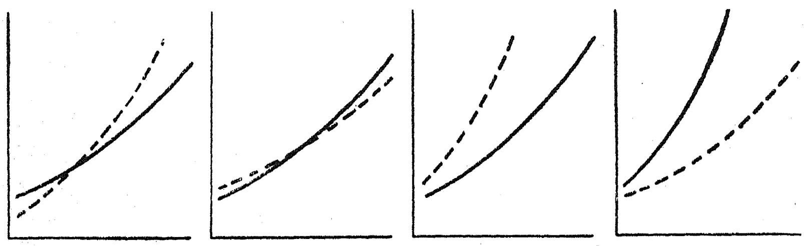


Figure 17: Change in supply and change in elasticity.

dicate a change in elasticity principally, while the third and fourth curves represent supplies which are not only more, or less, elastic but are also adjusted to new price levels.

SUPPLY AND THE TENDENCY TOWARD INCREASING COSTS

The changes in the conditions of supply which result from the operations of the tendencies toward increasing and decreasing costs require especial consideration. When the production of goods is subject to the tendency toward increasing costs, the supply brought into the market at successive periods may not be enlarged except by the expenditure of a greater outlay per unit by some supplier. If the enlargement of supply is affected by the additions of a few more high-cost producers, the fact may be illustrated simply by extending the supply curve upward somewhat further. It then shows no change in attitude toward supply on the part of the original suppliers, but reveals the fact that greater quantities have come to be available at higher prices. There is involved in this development no real change in the character of the supply. If the original producers attempt to increase their several supplies, each will be so affected by increasing costs that he will be able to offer his goods in the same quantity only if the effective market rates are above his new minimum, and the marginal supplier of the earlier market will not respond in the new unless higher prices are possible. As a consequence, higher prices are necessary if the supply is to be increased in this way.

If the additional supply were to come entirely from a few of the low-cost producers, it might be made available without any sub-

stantial change in the market, because producers who were able to supply goods at the old price at considerable profit could offer greater quantities at old prices in spite of somewhat higher costs of production. But when the increase of supply involves practically all producers, the effect of the resulting increase of costs is to change the position of the sellers, considered collectively, and to lead to a different quantitative response to prevailing prices. As the increase of production takes place, supposedly because the market requires larger quantities of goods, the supply curve is shifted upward on the graph as shown in Figure 18. The result in the market is that goods are sold in smaller quantities at the old price. Such development has occurred in the supply of many food products in America as population has increased and need for increased production been recognized by the producers.

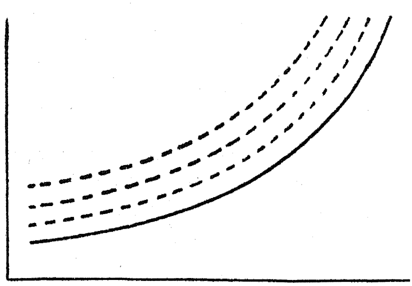


Figure 18: Supply and increasing costs.

SUPPLY AND THE TENDENCY TOWARD DECREASING COSTS

The tendency toward decreasing costs makes it possible to bring greater quantities into the market, even though they must be sold at prices lower than has previously been necessary. The potential supply in a market in which producers operating under this tendency predominate is affected by prices, at a given time, in the way that has been indicated in the preceding discussion. The prospect of high prices favorably affects realized supply and low prices have a deterrent influence. Nevertheless, it is possible, with

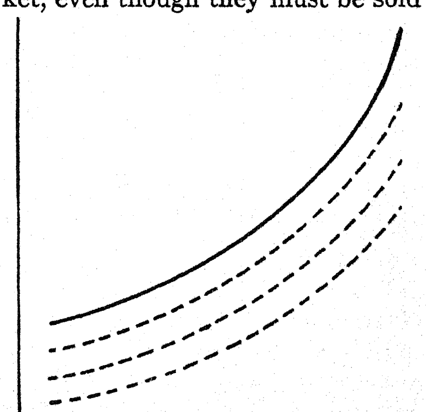


Figure 19: Supply and decreasing costs.

the lapse of time, so to change costs by expanding production that the supply of a later market may be offered at lower prices than was possible in an earlier one. The competition of producers who operate under the tendency to decreasing costs leads each to expand his output in order to develop lower costs. The one who succeeds may undersell other producers and occupy a larger place in the market. The marginal supplier, therefore, may strengthen his position by increasing his business, and the low cost producer has an incentive to offer greater quantities for sale at previously prevailing prices or to meet the demand of the market for still greater quantities at lower prices if necessary. As long, therefore, as the goods designed for any particular market may be produced in increasing quantities at decreasing costs, greater supplies may be offered for sale in succeeding markets even at declining prices.

XII

THE DETERMINATION OF PRICE

The interaction of demand and supply. The graph of price determination. Unrestricted price under conditions of freely variable demand and supply. Unrestricted price under conditions of fixed demand or supply. Prices intermediate between free and forced price. Price as affected by monopoly of demand or supply. Prices intermediate between forced and monopoly price. Fixed price under conditions of variable demand and supply. Prices intermediate between monopoly and fixed price. Prices intermediate between fixed and free price. Summary.

THE nature of demand and supply, and the circumstances under which potential buyers and sellers come to the point of activity in trade, have occupied our attention in the last two chapters. We have attempted there to discover the causes that change potential into realized demand and supply. In doing this, we have described only how the two elements themselves are governed, and have not explained how they in turn govern the market. Prices have their effect in guiding and controlling developments in demand and supply, but the latter limit the possibilities of price. Thus, if there are great quantities of goods offered as a market supply, and they are out of proportion to the strength of the demand, the probability that some goods may remain unsold leads to competition among the sellers, with the result that price is low. If the supply is low relative to the demand, the competition of the buyers, none of whom care to be left unsupplied, is a cause making for high price. There is, therefore, an interrelation, or interaction, of demand and supply that determines the location of effective price.

THE INTERACTION OF DEMAND AND SUPPLY

By the very necessity of the case, there can be no buying and selling until a price is found that is satisfactory to some buyer and some seller. For the same reason, there could be no satisfactory market if buyers and sellers in general were so out of agreement as to price that, at the price offered by the sellers, there would be practically no buyers, and at the price the buyers would be willing to accept, there would be too few sellers. There is a tendency in

the market, therefore, for price to come to a point where the highest possible number of prospective buyers and sellers will be accommodated. When demanders and suppliers are too far out of line with each other, some of each must disappear from the lists of actual buyers and sellers. The competition of those who have goods for sale eliminates those unwilling to sell at the lower rates, and the competition within the demand makes possible an increase in price which practically excludes from the market those buyers to whom only a low price is satisfactory. In this way, the realized demand and the realized supply are brought into balance. By such an adjustment the market arrives at a price which has the effect of bringing demand and supply into equilibrium. The market rate thus determined is not only an effective price, but it is also the price at which the maximum number of sales can be consummated.

Our conclusion from the foregoing is that the relation of demand to supply determines price. Likewise, prices react on demand and supply in such a way as to affect the quantities actually offered and asked in the market. If the latter are out of balance, prevailing market prices may be expected to change as a consequence, and when this change takes place, it has an effect in modifying demand and supply. The readjustment of demand and supply results in a new ratio between them and, ordinarily, brings them more nearly into equilibrium. If the process is incomplete at first, it is continued until price and demand and supply reach a point of stability where no one of them has the effect of changing the others.

THE GRAPH OF PRICE DETERMINATION

The demand and supply curves may be combined in one graph to illustrate the determination of price (Figure 20). We know from the location of the two curves that if the price were $4x$, the demand would be quantity 3, and the supply, quantity $5\frac{1}{2}$. The price could not remain at that point, therefore, because of the competition of the sellers, some of whom would necessarily be eliminated as those of lower costs bid the price down to induce additional buyers to enter the market. Supply would thus be decreased, demand increased, and price lowered. If the price were $2x$, the demand would be quantity 6, and the supply, quantity 1.

The price could not remain so low because, among the demanders there would be some who were willing to pay more. They would permit price increases, or even bid the price up rather than not secure the goods. Some demanders would drop out, and suppliers with higher costs would enter, until demand and supply were equal

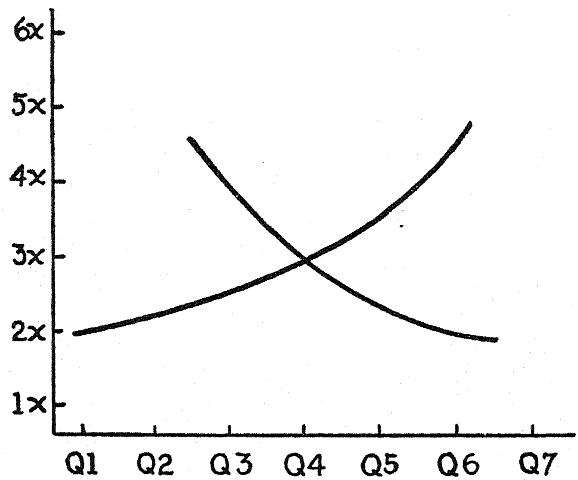


Figure 20: Price.

with price at a higher point. If the price were $3x$, the demand and supply would both be quantity 4. At that price the greatest possible number of buyers and sellers would be accommodated, and the market would have reached an equilibrium. The price $3x$ would exclude some potential buyers and sellers from actual trade, but all those remaining would find themselves able to complete their intended purchases and sales. The price, therefore, would tend to be $3x$, and the goods asked and those offered for trade would be quantity 4.

We have described the process of price determination as if it consisted of a series of steps in sequence and required some time for its completion. That some such adjustments as those described do take place in the market from time to time is true, but the operations of the forces of the market may be simultaneous, and it is important to consider the forces as so operating. Under intelligent management in a well-organized market in normal times, the price process involves no frequent changes of position on the

part of any one of the elements concerned. The forces of demand, supply, and price are comprehended at once by buyer and seller, and prices do not move very far away from the point of effectiveness and stability. The market is a field in which, in fact, the essential forces hold each other in check. A tendency to change on the part of one is met by the counteracting opposition of another. We do not have a triangle of forces exactly, because demand and supply do not affect each other directly. Whether or not there is a plentiful supply does not determine the nature of demand, and there may be a very great demand for goods without directly creating a change in supply. Both these factors work, rather through price so that when there is a great supply of some commodity, it affects prices, and the prices in turn change the actual demand. Demand is able to affect supply only by developing a high market price, which induces additional sellers to enter the market. Nevertheless, the three elements, demand, supply, and price, tend to hold each other in equilibrium, and a change in one of them has its effects in the others.

We need to make a second correction of our statement of price determination. There is not always such flexibility in the market as we have assumed for purposes of exposition. Any one of the three elements may be independently controlled by means which have been set forth in previous chapters. Hence, one element may be unresponsive to the influence of the others. It is possible that either demand or supply, or price itself, may become a fixed and unalterable factor in a given market situation. In such cases, the adjustment is necessarily all in the other elements. However, the forces we have described are still present, and the tendencies of the market process show only such variations as our study of demand and supply would lead us to expect. Price is governed in such circumstances by the same principles as in other cases, though the resulting market rates are somewhat different.

We come now to a description of the process of price determination in its concrete present-day manifestations.

UNRESTRICTED PRICE UNDER CONDITIONS OF FREELY VARIABLE DEMAND AND SUPPLY

There are numerous market situations which approach closely to the hypothetical case which we have used to illustrate the equi-

librium of demand, supply, and price. In the markets for the principal raw materials which are required for the manufacture of food and clothing, there are to be found the most satisfactory illustrations. These commodities are produced in large quantities, and the goods brought into the market are of very uniform quality. It is possible, consequently, to develop markets of considerable size, of great activity, and of comparative permanence. The elements of the potential supply are produced under many conditions, and realized supply is dependent upon prevailing prices. The flexibility of the supply is the greater, since many of the raw materials are capable of being preserved and stored from season to season, and sellers have some option as to the immediate or future sale of the goods. Because of the great number and wide distribution of the producers, the supply is not easily subjected to the control of any one person, and the sellers are found generally to be in competition with one another. In practically every particular, the supply conforms to our description of that factor in the statement above.

The demand for such goods as these is likely to be of long standing, and the demanders, as well as the suppliers, are numerous and widely distributed. Among the ultimate consumers there are people of every economic description and of differing desires and ability to pay. They exist in such numbers that almost always some may be found ready to buy. Among those who manufacture and otherwise prepare the goods for their final use, and who are the demanders in the markets under consideration, there is usually very active competition. The buyers are responsive to the influence of price, and, in the aggregate, the demand has a disposition similar to that represented by the median demand curve. These are markets, therefore, in which there is some elasticity of demand and supply and in which, for the reasons given, the normal influences affecting price may be expected to have free play and full effect.

The operation of the forces of demand and supply, as they relate to these commodities, is most easily observed in the wholesale markets. There we find the concentration of the supply and may observe the effects of the causes which determine it. The demand in the central market reflects the attitude of the consumers and other buyers in the entire field in which the goods are finally to be distributed. The forces determining price are of greater magnitude in central markets than in others, and the factors of the market

there are more responsive to the influence of price than they are elsewhere. There are such points of concentration as this in the wheat and cotton markets, to which reference has been made before. The traders even assemble in a single room, and samples are at hand for the use of cash buyers. The procedure is one of bids and offers, with the outcome that demand and supply are brought quickly into adjustment with each other, and a price which is very accurately governed by the state of the market of the entire country is agreed upon. As information as to potential demand and supply is received in this market, the immediate demand and supply change, and so, from time to time, the market is brought into a new adjustment to the conditions which normally are to control it. So nicely are the prices calculated in such a market that they vary from time to time by small fractions of a cent.

Such well-developed market centers are found in the wholesale trade of only a few cities and in a limited number of commodities, but the conditions essential to the same determination of price are found in less highly organized markets. The forces of demand and supply may control price in this way, in fact, whenever buyers and sellers are free to enter and withdraw from the market at will and price is allowed to vary in response to demand and supply. In the absence of artificial restriction, such a commodity as gasoline, which is widely produced and which is subject to a very extensive and elastic demand, is bought and sold at prices correctly reflecting the state of demand and supply. In the retail markets for such commodities as sugar and butter, the strength of a somewhat elastic demand and supply is very effective in controlling the exact point at which price is to stand from day to day.

Because of the free play given to all the elements determining price in such situations as those just described, we may refer to the resulting price as "free price."

UNRESTRICTED PRICE UNDER CONDITIONS OF FIXED DEMAND OR SUPPLY

Instances of absolutely fixed demand are comparatively rare, as we have discovered, though the tendency in that direction is marked enough to give us many cases of extremely inelastic demand. As an exemplification of one phase of price determination, however, the few cases are of great importance. We may suppose,

for illustration, that the demand in a given market for a certain drug for medicinal use is practically fixed. People will not consume more if the price is lowered, nor will they forego consumption if the price is raised. The potential demand and the realized demand coincide in this case, and price can have no effect in changing that factor. Such an illustration serves our purpose only in case the article in question constitutes an absolute necessity, for otherwise a few of the consumers would be inclined to withdraw on finding the price very high. Each consumer, of course, is desirous of buying at the lowest possible price, and, in the sense that all are anxious to be supplied, the consumers are in competition with each other. But the important fact is that the demanders in this case are entirely dependent on a ratio of demand to supply without the power on their own part to modify the ratio or adjust themselves to an unfavorable price situation. They are in a position where they feel the necessity of buying in all events. The adjustment, therefore, takes place on the side of supply alone. If the demand is fixed at a point relatively high in relation to supply, the price is directly and proportionately high, and none of the demanders is eliminated as a result. If the demand is low relative to the supply, the price is directly and proportionately low.

The instances of absolutely fixed supply, also, are either of infrequent occurrence or very temporary duration. Autographed and first editions of the works of great authors, the masterpieces of artists, very rare jewels, tapestries of peculiar design or workmanship, antiques, the products of the handicraft of people of historic races, and valuable articles made by processes no longer known, all may constitute a fixed or partially fixed supply. They are non-producible goods and goods that cannot be increased in a given market. There is the possibility of their being withheld from the market, however, and they constitute an absolutely fixed supply, therefore, only when their owners are compelled to sell them. There are many cases of fixed supply, on the other hand, which are due to miscalculation of the opportunities of sale and to the practical difficulty of putting goods into, or taking them out of, the market as the situation there and the interests of the seller would seem to require.

In all the cases of fixed supply, the variation of prices is ineffective to change the quantities which are offered for sale, and the goods, therefore, must be disposed of at rates which are finally

determined by the responsiveness of demand alone. If the goods are greatly oversupplied, the demand will respond only if the price is made very low. If the goods are undersupplied, they may be sold at very high prices. In the one case, the sellers are compelled to dispose of their goods possibly at a sacrifice. In the other case also, they sell regardless of cost, though sometimes at exceedingly great profit. The resulting price may be indicated by the position of the intersection of the demand and supply curves in Figure 21.

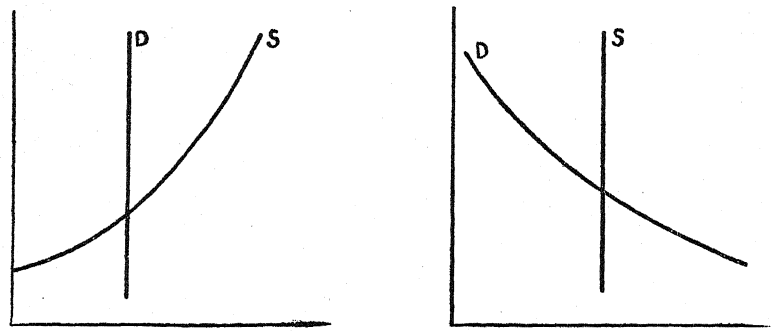


Figure 21: Price and forced purchase or sale.

The transactions which we have just described are, in a very definite sense, forced purchases and sales as viewed from one side of the market or the other. In the perfect case of fixed demand, the demander cannot withdraw. In the case of absolutely fixed supply, there can be no decrease of the goods offered for sale. Because of this inability of one of the factors to adjust itself to the market situation at will, we may call the resulting price "forced price" to distinguish it from the price which results from the free play of all of the factors of the market.

It is true that the name "forced price" seems somewhat inappropriate when applied to prices that are made by sellers who have a short supply and gain an exceptional reward and also when applied to the rates paid by purchasers who, though under compulsion to buy, are enabled to buy at favorable prices in an oversupplied market. Yet we may refer to all prices attendant upon forced purchases or sales as forced prices without implying that all such prices are unfavorable to all parties, and the name selected is justified, no doubt, by the fact that the significant prices of this group are forced prices in the full sense of the word.

PRICES INTERMEDIATE BETWEEN FREE AND FORCED PRICE

The point of difference between free and forced prices lies in the complete adjustment of all the factors to each other in the one case, and the non-responsiveness of either demand or supply in the other. (It is inconceivable, of course, except under very unusual circumstances, that both demand and supply could be fixed and at the same time result in a trade.) Between the two extreme situations which have been described thus far, there are many that are intermediate. In fact, prices are determined more often in markets which conform perfectly to neither of the two cases. We have had difficulty in finding satisfactory illustrations of fixed demand and supply, and it is probably true that perfect elasticity of demand and supply in the actual market is not to be expected, even where costs are fairly uniform and suppliers and demanders both personally responsive to the influence of price. The very difficulties that arise in keeping the potential supplies available to the demanders and in removing an excess of offered supply, as well as similar difficulties in keeping the demand of the market active, are sufficient to destroy the freedom of some one, at least, of the factors of the market.

The cattle market of a great meat packing center is one in which a freely variable demand and supply is ordinarily to be expected. Yet, in actual fact, following a favorable prevailing price, there is often excessive shipping of cattle to the market. The cattle thus shipped constitute a supply so great in the next day's market as to cause a decline in price. In the face of this lower price, the farmer cannot ship the cattle back to the farm, because of the great cost involved, and he cannot afford to hold them indefinitely in the stockyards. He is compelled to submit, therefore, to the disadvantage of selling in a market that is oversupplied, and he must accept whatever price is available under the circumstances. There is not an absolutely fixed supply in this case, because there can be increases and decreases in the actual number of animals offered for sale, and we have here only an illustration of the tendency toward forced price in what normally would be considered a free-price situation. In those markets which afford us our best illustrations of the free-price process, there are also frequent temporary shortages, and for the time being the sellers are in as favorable a position as are the sellers in any market of fixed supply.

Potatoes and apples are produced over limited areas and have limited growing and harvesting seasons. In the interval between harvests, all the season's crop of these commodities, so far as it is not already in the hands of the consumer, constitutes a potential supply. The supply must be disposed of within a certain period of time, and whenever a favorable price prevails, all the suppliers, supposedly, are willing to sell. For a time these goods may be offered in a perfectly free market, but as the end of the period for the disposition of the goods arrives, the supply approaches fixity. As much of these commodities as is still left unsold is offered, generally, at whatever the market permits, regardless of cost of production. This also is not a case of absolute fixed supply, because some elasticity arises from the fact that the suppliers in some instances prefer to take a direct and immediate loss rather than to go to the expense of marketing at a losing price. However, commodities supplied under such conditions as these and, we may add, any article which requires transportation into the market may be frequently oversupplied and undersupplied because of the impossibility of prompt and substantial increases or decreases in response to favorable or unfavorable prices.

Merchants handling certain lines of goods such as dry goods and clothing must make contracts of purchase several months in advance of the time at which the supply is to be sold to their customers. The goods may be seasonable, and for reasons of sound business policy it may be inadvisable to keep great quantities of them in stock. Ordinarily, they are to be presented in a market where a satisfactory adjustment of demand and supply is the rule. If the merchants have correctly anticipated demand, the goods may be said to be sold in a free-price market; but if they have oversupplied the market they find themselves in the position of any seller with a supply practically fixed. If it should turn out that the demand is greater than was expected and there is consequently an undersupply, there is a similarly restricted market, but with entirely different results to the merchants. Merchants generally hope to find themselves well stocked with goods in a market which as a whole is undersupplied. While they procure their supplies, generally, with the intention of correctly anticipating demand, they keep constantly in mind the risk and losses of overestimating that factor, and the exceptional gains from sales in an understocked market.

Demand is occasionally so inelastic as to be only very slightly affected by price, and, as we have already seen, this is a situation very closely approximating fixed demand. In a community of moderately well-to-do people, milk may be such a necessity that increases in price are ineffective in reducing the demand. People may resist a high price and express their dissatisfaction, but may continue to purchase the same quantities of milk as when price was lower. Where an article of great necessity is being sold, perfect freedom in the process of price determination is not to be expected. There arises a similar situation where a market has become saturated with certain goods, that is to say, where all demanders have purchased to the point of satiety. In such a market, no goods can be sold until after the lapse of time or until a new demand is created. Thus, manufacturers may have acquired raw materials to meet their needs for some time to come. Householders may have their year's supply of some such commodity as fuel. Demand has not become absolutely fixed, but it is very unresponsive to changes in market rates, and that in a market where at other times realized demand would be quickly adjusted to prevailing prices.

PRICE AS AFFECTED BY MONOPOLY OF DEMAND OR SUPPLY

Where there is monopoly in the market, there is, of course, the possibility of a fixed demand or supply; but because the element monopolized is under control of some one person or group of persons, there enters into the situation a cause of price determination which is not to be found in the markets which we have described so far. We come to the consideration, therefore, of a third development in the making of prices.

The graph in Figure 22, representing an artificial fixation of demand, discloses possibilities somewhat different from those which exist in markets of forced purchase or sale. The actual demand in the one case has the same inflexibility as in the other, but as we

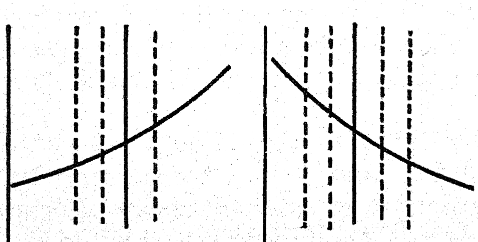


Figure 22: Monopoly price.

have seen, the monopolist has the power, within limits, of variously fixing the amount of the demand. As his own interests seem to require, he may restrict purchases to any particular quantity. The monopolist of supply has similar power, and his control is intended to keep the supply so low that it will command the desired price.

We are not to suppose the monopolist to be unlimited in his power to fix demand or supply. He is compelled to take account of the market in which he operates. The monopolist of demand may reduce his demand in hope of compelling the oversupplying sellers, by competition among themselves, to lower the price to him. But there are limits beyond which these sellers will not go if supply is to any extent elastic. Furthermore, if the market is greatly undersupplied to begin with, the demander may have all he can do to obtain a sufficient quantity for his use at any price. Finally, the limitation of his own demand may mean losses to him that entirely offset the gains of the lower cost of purchase. The latter would be true in the case of a producer with a local monopoly of demand who entered the market for raw materials for the manufacture of some food product and so reduced his stock of goods, holding out for lower prices, as to restrict unprofitably his own productive operations and sales.

The supplier, by controlling the amount of the monopolized commodity which is to be offered in the market at any one time, is able to force competition among the undersupplied buyers, with the result of relatively high prices. But this all depends upon the strength and state of the demand. If he is selling an article that few people want, his restriction of supply is ineffective. Even in active markets, there are limits to the competition of the buyers, and prices cannot be made to rise to just any height. In addition, if the seller forces prices up, he may find his sales so reduced that his total gains are much less than they would have been at a lower figure. Finally, the substitutes for a monopolized article may be so very close to it in desirability that the markets for the substitutes may offer as severe competition as there would be where no monopoly existed.

The fact is that monopolists do not fix demand and supply arbitrarily. In the exercise of their control, they are governed by some of the same considerations as are other buyers and sellers. Furthermore, they cannot directly and absolutely determine effective price, since there are some causes over which they have no

control at all. Such power as monopolists have, they exercise indirectly, and often very ineffectively, by limiting one of the factors upon which the determination of price depends. We are inclined generally to overemphasize the power of the monopolist. His power is, of course, very great when he controls the supply of an absolute necessity of life; it may be negligible in a thousand other instances.

Even in the supplying of a great necessity, the monopolist's own self-interest may dictate a price no higher than would result from a free-market process. This is more likely actually to be the case if the monopolist makes an experimental test of the results of supply restriction. A statement of his experience, in such form as Table 2, is useful in determining which is the most profitable supply. The study of the illustrative statement shows that the highest price is not always the most profitable. It is probable that in a business of decreasing costs, the very greatest supply would be the most profitable, and hence the monopoly price would be the lowest price possible, taking into account all costs.

TABLE 2

CALCULATION OF MONOPOLY PRICE

Price	Sales	Income	Expenses	Profit
$ .27	180,000	$48,600	$47,000	$1,600
.26	200,000	52,000	50,000	2,000
.25	250,000	62,500	57,500	5,000
.24	260,000	62,400	59,000	3,400
.23	280,000	64,400	62,000	2,400
.22	310,000	68,200	66,500	1,700
.21	350,000	73,500	72,500	1,000
.20	450,000	90,000	87,000	2,500
.19	480,000	91,200	92,000	(- 800)

To a variable expense of 15 cents per unit, fixed charges to the amount of $20,000 in the aggregate were added to arrive at total expense.

Monopolies are not always so permanent as to render feasible such a careful calculation as is illustrated by the table. We sometimes think of monopoly as one of the many economic institutions. It is, in fact, only a feature of a market situation. It may develop today and not reappear in the same market again. While there

are monopolies so well established as to control supply for great periods of time, there are many others which amount only to a temporary variation in conditions attending the purchase or sale of goods in very narrow markets and are attended by prices which are the outcome of uncertain and often mistaken calculations.

PRICES INTERMEDIATE BETWEEN FORCED AND MONOPOLY PRICE

The point of difference between forced and monopoly prices lies in the fact that, in the one case, supply is fixed by any one of many causes, while in the other, it is fixed by the monopolist, and in the fact also that there are ordinarily several suppliers acting independently in the first case, while, if there is more than one supplier in the second, all are parties to the restriction of supply.

Some of the intermediate developments have been suggested in the description of the limitations to which all monopoly control is subjected. Thus, one may have in his own hands the entire demand and yet be under such pressure to buy as to be at the mercy of the market. He has a partial power to control, but the amount to be purchased is affected by other causes. As sole buyer, he may be said to be a monopolist, but the prices which are to be paid in such circumstances are those that would be in effect in any situation of fixed and excessive demand. One may have all the supply in a given market, and yet, if the good is a perishable, he may be in a position no better than if there were several suppliers with a fixed supply. If he is under pressure to sell, he may need to take whatever the market will afford him. In any instance in which there is a fixed demand or supply and the amounts to be asked or offered in trade are partly subject to the control of a monopolist but are not entirely so, price is determined by causes less clearly defined than is the case in the illustrations given above.

FIXED PRICE UNDER CONDITIONS OF VARIABLE DEMAND AND SUPPLY

Formerly, all prices, even in the retail market, were left to the determination of the interaction of demand and supply in one of the several ways we have described. The price, therefore, would not be known long in advance of the presentation of the goods to prospective buyers. In some parts of the world, this is still so. The merchant states his price only when the customer is at hand to

make a purchase, and he changes it from time to time as the opportunity for a profitable sale seems more favorable than previously, or less so, and as other conditions seem to warrant. Manufacturers also for a long time made different contracts with the various merchants who were to sell their goods in the retail markets. In these transactions, terms to the several buyers differed, and prices were subject to frequent changes. The manufacturers, furthermore, had no knowledge or control of the final price at which the retailers disposed of the goods to the consumers. This, also, is still the rule in the markets for undifferentiated commodities; but when the manufacturer turns out a product of individuality or peculiar quality to which he attaches his name in order to reap the benefits of the special demand which may be created, he often sets a price in advance. While it is not the practice throughout the entire market, there are to be found many instances in the field of branded goods of a process of price determination in which the price is fixed by the seller in advance of all attempts to sell. These prices are adhered to so strictly by some sellers that they are practically never changed and are made to carry through the wholesale and retail markets of all parts of the country.

It is possible to have fixed prices without having absolute uniformity in the prices of any given seller. Where one manufacturer would offer his product at one price to all buyers regardless of the terms of the contract of sale, another would offer a discount from a stated price to purchasers who bought in large quantities, or to those who paid cash, or to wholesalers as against retailers, or to merchants as against consumers. These are called quantity, cash, and trade discounts, respectively. Some sellers make secret cuts and rebates to favored purchasers and yet sell at fixed prices even to those so favored. Some concerns include the costs of delivery in their prices and are said to sell at "delivered" prices. Some sell f. o. b. and thus require the purchaser to pay transportation charges. Still others base their prices on some basing point other than the place of manufacture and require the customer to pay the freight from that point to his own place of business. Prices in the iron and steel industry were once so determined and gave us the expression "Pittsburgh plus."

Retailers, with a certain few, though possibly important, exceptions, customarily set a price upon goods they receive in stock and adhere to this price in all their attempts to sell to customers. They

arrive at this price by taking into account the costs involved in the purchase of the goods and their delivery to the store, the various costs of conducting the retail business, numerous as they are, and probably also the condition of the market in which the sales are to be made. The retailer may be influenced by customary prices, by questions of convenience in the making of cash payments, by the advertising value of odd prices, and similar considerations. To the initial purchase cost of the goods in question as they were received from the producer or wholesaler, there is added a certain proportion of the joint costs of store operation. The sum is called the mark-up. It is calculated usually as some fixed percentage which experience has shown to be adequate to cover a proper share of the general costs, but the percentage rate or the final sum of the mark-up is often modified, as has been suggested, to meet the needs of various market situations.

On first thought, it might appear that the sellers are disregarding demand and supply in thus fixing prices, and that prices are not invariably determined in accordance with the law which we have posited. Therefore, we must examine this phase of market operations further. We may note, in the first place, that merchants are not free to fix market rates at will, and that their prices become effective only when they conform to the requirements of demand and supply. If the attempt is to fix a price which will be effective under existing market conditions, the merchant must accurately estimate the state of the market. If the prices are too high, he will not be able to sell the goods, and if the prices are too low, he will not be able to meet the demand and will receive a return upon his sales less than he might have received. Secondly, if the merchant is compelled to sell at certain fixed prices set by a manufacturer, he is under the necessity of buying supplies carefully in order that there may be no more goods offered in the local market than can be sold at the predetermined price.

Both manufacturers and retailers have one other recourse: the creation of a greater demand. Prices which may seem too high in consideration of previous market rates may turn out to be exactly right if the conditions of demand can be changed. An aggressive seller, therefore, instead of submitting to the control of existing demand and supply in fixing his prices, attempts to make prices what he would prefer by setting them at the point which he thinks necessary or desirable, taking into account costs and profits, and

then bringing demand into conformity. Prices that were too high for a part of the potential demand become satisfactory to a greater number of customers by this process of demand creation, and the seller is enabled to dispose of larger quantities of goods often at greater profit. (Of course, not all selling and advertising is in the nature of demand creation, and not all plainly marked prices are of this description.) Because merchant's fixed prices are like other prices in that they are effective market rates only when they are satisfactory to prospective purchasers, demand creation is often the only method by which goods can be sold at prices fixed to cover costs.

We may illustrate the fixed-price process with the aid of a graph (Figure 23). If prices are fixed by the merchant at $5x$, and the

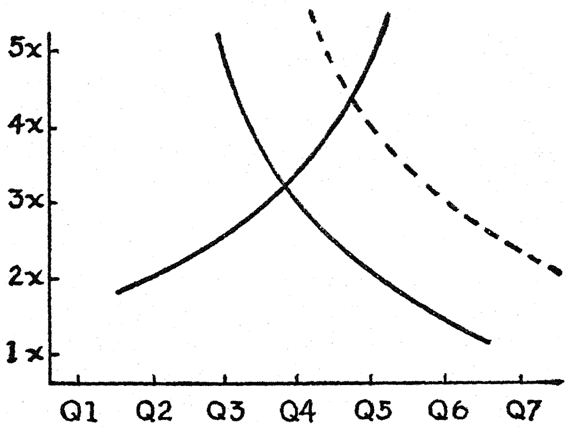


Figure 23: Fixed price and demand creation.

demand actually calls for the quantity he has to dispose of at that price, he has fixed an accurate and immediately effective market price. However, if at the price $5x$, the demand stands only at quantity 3, while the merchant expects to sell quantity 5, he will need to create a more intense desire for the goods in the minds of the present demanders, so that some will either buy more goods or pay higher for what they do buy, or he will need to create a new demand in the minds of still other people, who will thus take their places in the market. If he succeeds, the result is a changed condition of demand, and the demand curve is to be shifted to a new position on the graph. Demand and supply are finally in equilib-

rium and the price is in conformity with the law of price as previously stated.

PRICES INTERMEDIATE BETWEEN MONOPOLY AND FIXED PRICE

The product of one manufacturer, though it is sold nominally in competition with goods serving exactly the same purpose produced by other manufacturers, may be so highly differentiated from the competing goods that it constitutes the supply of a market somewhat separate from that in which other goods are sold. Under such circumstances, the producer has a control of supply that approaches that of a monopolist. Though ordinarily he sells his goods uniformly at one fixed price, by adjusting his output to the state of the demand he may be able to sell at a price which yields him a greater gain than would be possible in a highly competitive market. We may say, therefore, that, in some measure, differentiated articles are offered in the markets under conditions approaching monopoly, even though they are subject to the competition of goods of the same or similar kind and though there may be some attempt at demand creation. They present a case intermediate between monopoly of supply and direct fixation of price.

On the other hand, the one who has clearly a monopoly of supply may proceed in his market operations by fixing a price rather than by limiting supply. Limitation of supply may mean high profits per article sold, but yield a very meager return in the aggregate. It would be a much better policy for the monopolist in such a case to attempt to sell as great a quantity as possible and to accomplish this by demand creation rather than to limit supply. The outcome would be greater sales, and sales at a price even as high as could have been secured by control of supply. The producer of a small patented novelty often finds this policy the only profitable one. He has no hope of great gains by exercising his monopoly control and therefore enters the market with a predetermined price and puts himself into competition with goods intended to satisfy the alternative wants of the consumer. There are so many such instances that the public can scarcely tell whether a particular branded article is being sold at monopoly price or at the more common seller's fixed price.

The members of trade associations are able, through the agency

of these associations, to come to an agreement upon a restriction of output. Recently, certain of these organizations have been found to dominate so fully a particular industry that they have a real monopoly of supply. But the association may prefer simply to set a price which will be acceptable to all the producers within its membership and then undertake to increase sales to the point necessary to dispose of all the supply that may be offered for sale. The merchants of a town are sometimes accused of attempting a monopolistic control of the market by combining and agreeing upon prices. If they do not in any way restrict sales or apportion and limit the amount of goods which may be offered to the public, they are not exercising the full power of a monopolist. Rather, they are simply combining in the fixing of price. The market rates are very likely to be uniform whether they so combine or not. Their act may, nevertheless, be so prejudicial to the public interest that it may be regarded as a conspiracy, and such agreements may therefore be forbidden. But it must be remembered that when a price is fixed in this way, it is effective only in case it is in conformity with the requirements of the market as it stands or as it will be when the merchants have succeeded in increasing the demand. The case is intermediate between monopoly and fixed price.

PRICES INTERMEDIATE BETWEEN FIXED AND FREE PRICE

When sellers who ordinarily sell at fixed prices resort to frequent concessions to the attitude of the existing demand, their prices begin to take on the character of free price. Advertising campaigns and experience in selling may reveal the impracticability of the prices fixed. If the seller yields, he is allowing price to respond to demand rather than compelling demand to adjust itself to price. Reduction sales, in many an instance, are a confession of an error in fixing prices, and in others they are a deliberate acceptance by the seller of the free-price procedure. Retail stores that offer reduction sales frequently, excluding from consideration sales of remnants of stock, or that make concessions privately to various buyers, maintain markets that stand somewhere between the markets of fixed and free price.

On the other hand, there are those who sell at prices which are intended to be freely variable but which do not follow the wholesale market adjustments closely. The sellers fix their prices for a

brief period of time, and while they keep in line with free market prices in general, they take the position temporarily of those who fix prices and compel demand to change. In those retail transactions where free market prices are expected to prevail, as in the market for butter and eggs, we find that the merchants advance or reduce the prices only at intervals. This does not constitute real fixation of price, but it offers another one of the intermediate situations in full conformity with neither principal case. The difference between fixed prices and free prices is a matter, chiefly, of the degree to which demand or supply is compelled to conform to price, or price is governed completely by existing demand and supply.

SUMMARY

There is, in fact, one law of price. There are three factors combining to determine the exchange ratios of the market. Each of the three may be freely and entirely responsive to the influence of the others, and they may, therefore, play equal parts in the determination of the quantities to be demanded and supplied and the price to be offered and accepted. However, any one of the three may be immovable and unresponsive, and the others, in such situations, are compelled to adjust themselves to the fixed factor, if there is to be a market and trade. The fixation of demand and supply may be due either to natural or artificial causes; the direct fixation of price is artificial.

In the study of the practical development of the market today we need to take account of four clearly defined situations. But the conditions which the four typical cases present are realized absolutely in only a limited number of instances. Between any two of the principal market cases, closely approaching one or the other or seemingly midway between, are to be found numerous intermediate developments. This is as might be expected. Market forces work themselves out to innumerable results, confined within certain limits.

A conception of the scope of the field of price determination and of the intergradation of the numerous market price processes may be made clearer, perhaps, by a chart representing what might be called the orbit of price if that did not suggest that every price goes successively through all the possible stages. The chart (Figure 24) is to illustrate the fact that every price is the re-

sultant of a combination of causes, and that between the points where the exact operation of the causes is most easily discovered there are numerous intermediate situations.

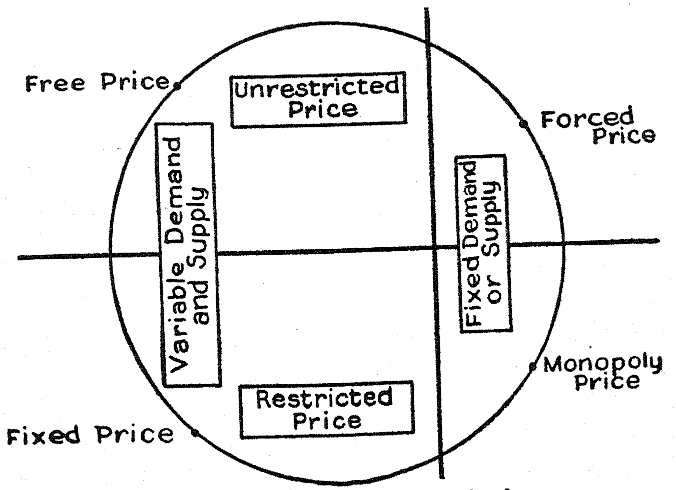


Figure 24: Field of price determination.

XIII

THE DETERMINATION OF PRICE *(Continued)*

Complementary markets. Markets of competing demands or supplies. Markets of interdependent demands or supplies. Localized markets and markets of immediate and future delivery. Change in price. The consequences of changing prices. Changing prices and profiteering. Changing prices and industrial crises. Normal and fair price. Criticisms of the process of price determination. Price regulation. Miscellaneous valuations.

In our description of the process of price determination in the preceding chapter, we have taken account only of immediate causes as they appear in a single market of the present. In this chapter we shall begin with a consideration of certain additional influences, affecting the outcome of the process under consideration, which arise through the interaction of markets. We shall turn then to a statement of the circumstances attending changes in price and the occasional consequences of a sudden change in the entire level of prices. We shall conclude our discussion of price determination with some attention to current criticisms of the various phases of the process and to the subject of public regulation of prices. The closing pages will be given to a brief treatment of the valuation of goods for purposes not hitherto especially defined.

COMPLEMENTARY MARKETS

The demand, supply, or price of one market may operate as a cause in another market which in most particulars is separate and independent. The closest and most continuous interaction is found in those markets which are complementary to one another in the sense that they are engaged in the transfer of the same goods, each at a different stage of the process of the goods from producer to consumer.

The markets for raw materials and for the manufactured goods to be made therefrom, for one illustration, and wholesale and retail markets, for another, are complementary. There is known

to be a close connection between the prices of wheat and flour, of leather and shoes, and of wool and clothing when there is no direct interference with the operations of their respective markets. The manufacturers of woolen goods, for instance, are buyers of wool and sellers of clothing, and their presence in both markets serves to keep prices in the two in close adjustment. The prices in the raw materials market affect the manufacturers' demand for wool, and hence also the supply of clothing. The price of clothing, though controlled in part by the manufacturer or supplier, largely determines the demand in the wool market. Since the demand in the one market must correspond to the supply in the other, the two markets are kept in harmony. The ultimately controlling elements in both are the supply of raw wool and the demand for clothing. The price of clothing tends to differ from the price of wool only by the amount of the manufacturing cost of the marginal manufacturer.

The diagram in Figure 25 places the clothing and wool markets in the relation to each other which we have indicated. It shows

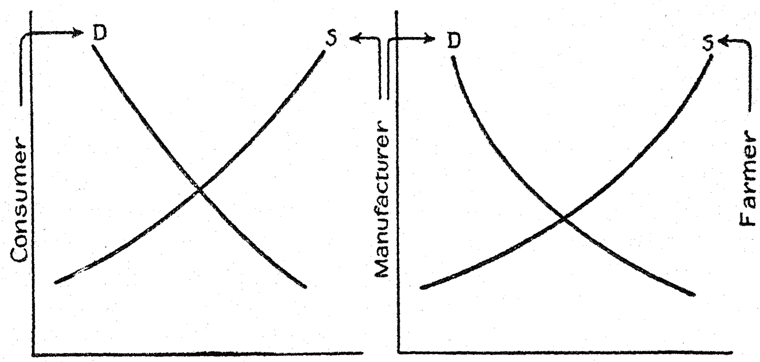


Figure 25: Complementary markets.

that the manufacturer appears in both markets, bringing supply from the one into the other and transmitting the demand of the consumer to the producer of wool.

A somewhat similar diagram might be used to illustrate the relations between a producer's initial market, the intermediate wholesale market, and the final retail market. The peaches sold in Georgia to a New York wholesaler become the supply in the retail stores of the city of New York. The demand of the whole-

saler, who buys in the country market, only reflects that of the retailer, and the latter, as a demander in the wholesale market, is only an intermediary between the consumer and the wholesaler. Prices in the three markets tend to correspond, since the demand of the consumers is transmitted through the retailer and wholesaler to the peach growers, and the costs of the growers affect the actual supply in the initial, the wholesale, and the retail markets.

Goods may go through the hands of several middlemen, and of manufacturers also, before being completed for use. A series of transactions each involving a price may intervene, therefore, between the first and the final sale. Each price is determined in part by the supply of the original producers and by the demand of the ultimate consumers, no matter how many steps there may be in the entire process. The results in all such cases are to be explained only upon the basis of the interaction of markets.

MARKETS OF COMPETING DEMANDS OR SUPPLIES

A very different relation between prices is found in markets offering competitive articles, or articles that serve as substitutes for each other. If the price of one becomes too high, the consumer may withdraw and appear in another market. This causes the demand for either commodity to depend somewhat on the price of the substitute or alternative commodity. The possibility of selling a single commodity for two or more purposes is similar in effect, since there are two sets of demanders appearing in somewhat separate markets. If the producer cannot sell to one group of purchasers for as much as he can get from another, the supply will be diverted from the first to the alternative market. As a result, there is an adjustment of prices and, in fact, almost invariably equality of prices if the supplies in the two markets are identical in kind. As an illustration of substitute commodities, or competing supplies, we may mention geese, ducks, and turkeys at Thanksgiving time. The price of one effects to some extent the demand for the others, and consequently there is some relation between the prices. Alternative uses, or competing demands, are found in the market for corn, which is purchased largely for feeding to animals but may be taken also by the various corn-products industries. The interaction of markets results, practically, in one price only for the commodity corn.

We may illustrate the relation of such markets as have just been described by a graph in which it is made to appear that the demanders of two separate markets are identical people considering two different goods with the intention of choosing between them. The first graph in Figure 26 thus represents competing

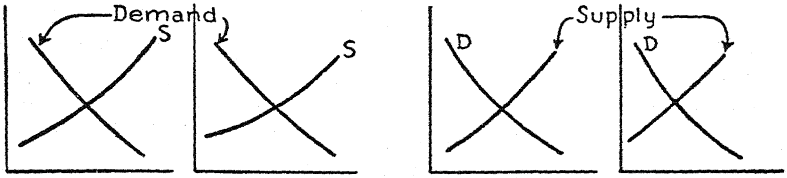


Figure 26: Markets of competing demands or supplies.

supplies. In the second graph, the same commodity, corn, is a potential supply in the two separate markets, and the demanders, as groups, are in competition. This latter case is less likely than the former to appear as an actuality in trade, since there is the probability that the two markets will be merged in each other.

MARKETS OF INTERDEPENDENT DEMANDS OR SUPPLIES

Articles which have been jointly produced or which are intended for joint use, when not offered in the same market as one supply, are sold in markets which are not entirely independent of each other. The relation of these markets has been suggested by our previous discussion of interdependent demands and supplies. As we have seen in the case of by-products, the supply of the by-product is offered for sale somewhat regardless of prevailing prices, due to the fact that the supply is produced as an incident of the creation of supply for another market. Consequently, supply in the one market is affected by the supply in the other. Both supplies are controlled by prices in one market. In a slightly different situation, supply in two markets may be determined by prices in either market, as either may offer the opportunity for the sale of one of two joint products at a return which is sufficient to cover the costs of production of both. Where there is such interaction of markets as this, favorable prices in one market, due to the strengthening of demand, may have the effect of increasing supplies in another market and, except for a corresponding

increase of demand there, may cause a decline of prices in the second market. Thus the demand for gas produced by the coking of coal might so increase as to create a favorable market for gas and at the same time cause such an oversupply of coke as to result in a decline in its price. It is probable that in some instances the tendency of low price in the second market to stimulate demand there would counteract the effect of the changed conditions of supply, with stabilizing consequences, though, in general, prices in one or the other of the two markets are likely to be subject to even greater variation than would be the case if the markets were independent.

When demands are interdependent, prices in each market affect demand in both. If prices are especially favorable in one market, buyers may buy accessory commodities in another in spite of increasing prices there. Generally, however, the combination of prices must be satisfactory, and prohibitive rates in one market may shut off demand entirely in another. People will not install electric equipment if they cannot afford to buy electric power. It is to be noted that this action is the reverse of that which takes place in competing markets. In the latter, prohibitive prices on one commodity lead to an increase of the demand for another.

LOCALIZED MARKETS AND MARKETS OF IMMEDIATE AND FUTURE DELIVERY

In centralized markets of wide scope, there may be concentration of all the demand and supply of a given area, and a single price may govern all sales; but when there are two or more markets in one area, prices are generally not absolutely uniform but are kept in adjustment by an interchange between the markets.

In that which seems to be a great unitary market, there is almost invariably some territorial subdivision. This is the case in the markets for almost all farm products. The price at the point of greatest activity is not the actual price of the entire market, but the several prices of the local markets are based in part upon the activity at the point of greatest concentration. Market rates in certain localities differ from those in others in all such cases by as much, probably, as the cost of transporting supplies from one point to another, and they are kept from a greater

spread, or variation, by a shifting of demand or supply from market to market as opportunities of advantageous purchase or sale seem to warrant. Between the localized trading centers there are some shippers and some buyers who may appear as conveniently in the one as the other. In addition, there are traders who make it their principal business to equalize demand and supply between two or more markets by buying in one and selling in the other.

An interaction of markets similar to the territorial interaction just mentioned is found where goods may be sold either for present delivery or for future delivery. The prices in the present and future markets are kept in harmony with each other by the action of traders whose business it is to buy in the "cash" market when prices are low there and take this supply into the "futures" market. An illustration may be found in wheat. In December, wheat is being sold for immediate delivery and for delivery in May. There is naturally some difference between the December and May prices because there are storage and interest costs involved in the carrying of the wheat which is on hand and ready for immediate delivery. Except for the difference caused by such items of cost, the two market prices may be very much the same and are likely to be kept in harmony. If there is a tendency for prices in the market for May delivery to become higher than conditions warrant, more wheat is offered for future delivery, with the effect that the May price is lowered, and, by the withdrawal of supply, the cash price raised.

CHANGE IN PRICE

As long as demand and supply are controlled by causes which remain the same, so that the curves which represent demand and supply continue to indicate that the same quantities will be demanded and supplied at any one of the various possible prices, in the absence of a change in the value of money and other disturbing causes from without, there will be no change in price. Market rates may, in fact, remain stable for years. So far in the discussion of price determination, we have assumed the existence of a condition of stability, and have considered the relation of price to demand and supply at one point in time. But in other chapters we have explained the effect of changing price upon

the factors of demand and supply, and we may now bring the tendencies toward change together in a figure which will show how price is affected as one or both of the two other elements take new positions on the graph (Figure 27).

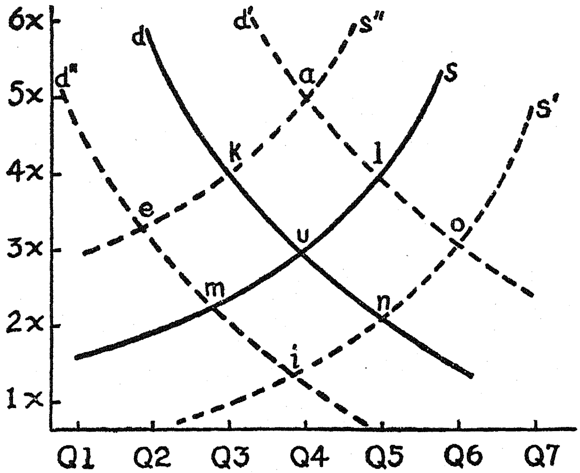


Figure 27: Changing prices.

As long as demand and supply are stable, only the quantity 4 will be sold at the price $3x$. Quantity 5 will be offered only if the price is increased to $4x$ and will be demanded only if the price is reduced to $2x$. But if goods come to be supplied more easily than before because conditions of the supply have changed, quantity 6 may be offered at the price $3x$, and a new supply curve must be drawn, which we will indicate as s'. If the demand grows in proportionate extent, the quantity 6 may also be demanded at the price $3x$, and a new demand curve will need to be drawn, which we may indicate as d'. Under these circumstances, supply and demand both having increased, a greater quantity may actually be sold than before without change of price, and price and quantity may be indicated by the point *o* on the graph. In a second situation, if the demand has grown, but suppply in the interval has decreased, price will necessarily be higher, and if the two changes are equivalent, the same quantity may be sold, but at a higher price. The new price and quantity may be indicated by the point *a* on the graph. If there are exactly equiva-

lent decreases in both demand and supply, it is probable that lower quantities will be sold without change in price, as indicated by the point *e* on the graph. In this way, every variation in the relative strength of demand and supply causes some change either in the price or in the quantity bought and sold in the market. Price and quantity both may be changed as the forces of the market work themselves out in different ways. The several possible situations are indicated on the graph by the points at which any one of the supply curves crosses any one of the demand curves.

THE CONSEQUENCES OF CHANGING PRICES

Changing prices are of different consequence to the various interests concerned in the market, but they are a source of uncertainty and a cause of disturbance in the market as a whole. Aside from the fact that demanders and suppliers in a given market may gain or lose as the conditions under which they are permitted to buy and sell are modified, there are general consequences from continuously changing prices which extend to practically all economic activity. At this point we shall introduce the subject and state the principal conclusions. Later we shall discover additional causes of changing prices, and shall attempt to form a judgment as to their significance.

Rising prices are particularly unfavorable to people with fixed incomes. Those who receive wages or salaries which cannot quickly be adjusted to new market prices find their incomes constantly yielding less and less in the way of real goods and services as prices rise. In other words, their real incomes decline even though their nominal or cash incomes remain the same. Even if their incomes are derived from wages which can be adjusted to prices, the adjustment may ordinarily be expected to follow, rather than precede or accompany, the rise in prices which has made clear the need for higher wages. People who have loaned money for long periods of time, including those who have bought corporate bonds and those who have made investments at a rate of interest which cannot be changed, find their real incomes from these sources declining as prices rise. The consequences affect the poor as well as the rich. Both the rich and poor receive salaries, and many people in very moderate circumstances as well as those who are independently wealthy have incomes derived

from investments. Dependent children, also, are often provided for by interest-bearing funds, and some have small estates held in trust for their support. Elderly people often depend entirely upon savings which bear interest.

Rising prices favor those who have payments to make in the future. If prices rise, the debtor will have the opportunity of paying the interest on his debt and probably the principal of the loan in funds which have less purchasing power because of the change in prices. If, at the same time, he is a producer and seller of goods in a market in which prices are advancing, he finds his cash income growing. All those who have goods to sell, since they buy or produce at costs adjusted to the markets of one time and sell presently in markets which have reached new levels, gain by upward movements. Merchants especially, except as price changes are anticipated by those who supply them with their stocks in trade, are in a position to receive an extra cash income from the simple fact that market prices have increased.

The effects of changing prices are incapable of exact calculation, and unstable markets add an element of risk to economic activity. Even when it is possible for people to prophesy changes in price and thus discount the results of the changes to some extent, the factors of change are of such irregular operation that it is impossible to avoid all the cost of uncertainty. An attempt to anticipate an increase of prices may affect the distribution of gains and losses so far as particular individuals are concerned and may reduce the shock of sudden change, but in some instances it may only hasten, without diminishing the extent or the effects of the expected readjustments of the market.

CHANGING PRICES AND PROFITEERING

In periods of rapidly advancing prices, the gains of merchants in the selling of goods may be greater than is necessary for the maintenance of supply in ordinary markets. The merchants continue to pay wages, rent, and even interest at only slowly increasing rates or possibly at rates fixed absolutely for the time being. They offer goods which have been purchased at prices more favorable to them than those which prevail at the time they sell. If the advances in retail prices are only such as the state of the market itself warrants, the position of the merchant is a strictly

legitimate one and the natural outcome of changing prices. The profits which the merchants make may be explained by conditions for which the merchants assume no responsibility, and they are the same in kind though greater in degree than the profits made under ordinary circumstances. If, however, the seller takes advantage of the situation to charge prices in excess of the prevailing rates, he is engaged in profiteering.

Those who, as consumers, deal with these merchants under such conditions are disappointed in finding their purchasing power on the decline and are irritated by the exceptional profits the merchants are making. They are further irritated by the suspicion or belief that the merchant is taking an unfair advantage of them. This is a thing comparatively easy to do when prices are rapidly changing. The buyer's knowledge of the market, developed in other times, is not adequate to the new state of affairs. He has little means of discovering exactly what changes in prices are warranted. He could know this only if he were very well informed on the state of demand and supply in the immediate market and all interacting markets.

The dissatisfaction of the customer is somewhat aggravated by the fact that some merchants continue to mark up their goods on the basis of the prices they have actually paid at wholesale, disregarding for the time being the more favorable retail market rates which have come to prevail. Some, therefore, are marking goods on the basis of what they would have to pay at present if they were to replace the goods to be sold, and others are marking goods on the basis of what they did pay for the goods in a market of some time ago. The latter may be said to mark goods on the basis of actual or original cost, and the other to mark on the basis of replacement cost. This difference in practice gives the prices of such a period of change a wider variation than they would have otherwise, and the market is consequently the more uncertain and unsettled. Accusations of unfair practices and of the charging of excessive prices are likely to be made then, whether with proper foundation or not.

Profiteering is much more likely to take place, as a matter of fact, in a succeeding period of declining prices. Of course, if the upward change in prices has been very slow and has continued over a long period, no acute disagreement between buyers and sellers occurs. The same is true when prices are slowly declining.

But when there has been a very rapid rise, followed by a similar decline, there is adequate opportunity for profiteering. The practice is less likely to be observed when prices are on the decline because the situation is in general more favorable to the consumer, and irregularities excite his suspicion less than when prices are rising.

The merchants who adhered to the original cost basis of markup at first and who still adhere to it as prices decline find themselves charging more than the prevailing market rates for their goods in the second period for the same reason that in the earlier period they were the ones charging less. Those who mark their goods on the replacement basis, on the other hand, gained at first but are later in the unhappy situation of losing money on almost everything sold, since, of course, they buy at a market rate somewhat higher than the one at which they sell, and replacement costs are lower than the actual cost of the goods. There is a temptation, in this situation, to change the basis of price marking and, instead of continuing to calculate on replacement basis, to mark the goods according to original cost. Those who do this have then the advantage of being at the top of the market on the rise and highest in their prices also on the decline, and they shift to the consumer who bore the losses on the way up the corresponding losses which the seller may properly be expected to take in the period when prices are going down.

It seems that the interests of all parties are best served if prices are kept in line with fundamental market conditions, and there can be no fraud in adjusting retail prices accurately to demand and supply however unfortunate the changes in those elements may be to one party or another. If prices are thus adjusted to market conditions, there is no profiteering, whether goods are marked upon the basis of actual or of replacement cost, since there will be gains in one period and corresponding losses in another in either case. There is no profiteering when there is adherence either to the earlier or to the later prices throughout the curve, but the seller is at fault who makes an unwarranted variation from that procedure at the expense of the customer. The real essence of profiteering is the advantage taken of the consumer, who, being less well equipped for the bargaining of the market, cannot always bring to bear promptly upon prices in periods of change the full force of competition. It goes almost without saying, also, that

sellers may take unfair advantage of buyers in times of very stable prices as well as in times of change.

CHANGING PRICES AND INDUSTRIAL CRISES

A second economic issue of periods of changing prices is to be found in their effect upon the producer rather than upon the consumer, whose interests have just been considered. If the producer were able accurately to predict changes and to judge how extensive his productive operations should be in times of change, he would be able to adjust himself to the situation, taking such gains as came and such losses as were necessary without injury to the stability of his enterprise. In fact, he would be able to respond with increased production as prices increased and restrict his output as prices declined, with the effect of counterbalancing to some extent, the tendency to change in price. Unfortunately, the period of rising prices offers such exceptional profits that invariably some among the producers expand production beyond reason and make large investments of capital to be used in further and further expansion. If it is an extraordinary event which has caused the rising prices, the period may come to an end very suddenly. The fact that the rising prices are due to unusual circumstances is recognized by the best managers as a cause for caution. But in any event there are to be found those producers who take too great a chance, expand unwisely, and fail to prepare for the decline in the market and the fall in prices which invariably takes place.

These people find themselves presently with goods which can be sold only at a loss. Their costs of production in many cases are so high that they cannot continue to operate under the conditions which prevail after the decline sets in. They have procured investments in their enterprises in many cases by creating obligations which they cannot meet. The result is the failure of these concerns. Those to whom they are indebted, on failure to receive payment, may also be involved in the disastrous consequences of their mutual mistake. Such a situation is called an industrial crisis if it extends to a sufficient part of the field of production to become of great social consequence. It may lead to so great a breakdown in production that the entire market may become inactive, and producers and consumers who have conducted their

affairs in conformity with the soundest policy may be unable to carry on the customary sales and purchases. Industrial crises are accompanied by a breakdown in the organization which exists to extend credit and to assist in making payments, a matter to be described later, and this adds complications which make it still more difficult for purchasers, as well as producers, to return to a state of normal activity.

In situations such as the one just described, it is often said that there has been overproduction. In a sense this is true. There has been a production of more goods of certain kinds than could be disposed of profitably in the market. Strictly speaking, however, there is no such thing as general overproduction. That could occur only in case the entire consuming power of the people had been exhausted. Furthermore, scarcely any important good has existed in such quantities that it could not all have been put to use and was not greatly desired by some who could not acquire it. But when the market breaks down in the fashion just described, there is an actual oversupply in the market, and it is only when production has been reduced to a very considerable extent that readjustment takes place and sales are again to be made at a profit.

NORMAL AND FAIR PRICE

There seems constantly to recur in the thought of those who give consideration to prices the idea that some prices are normal and are likely to be found with some regularity in a well-ordered market. Economists have long struggled with the concept of fair price in an effort to discover at what figure prices ought to stand under various circumstances. The idea of fair price carries an ethical suggestion. It implies that some prices are just and right in the moral sense, and that others are not. We have seen that it is possible for buyers and sellers to take advantage of each other in the market, to play upon each other's ignorance, and to abuse each other's confidence. Prices arrived at in this fashion are clearly unfair, and this we may say, no doubt, without debating at all the various standards of right and wrong to which people may hold. There is such a thing as a fair price. There may exist, also, such a thing as a normal price, in the sense of one that has long prevailed and, therefore, is usual and inclined regularly

to occur in the absence of any disturbing influence in economic activity.

The question arises whether or not there is any basis for determining what would be either a normal or a fair price in changing circumstances and in periods of uncertainty. In fact, it is a question whether, in ordinary times, there can be said to be any other basis for determining what is the correct price to be charged for goods than the simple operation of the law of demand and supply. Some have supposed a proper price to be one that just barely compensates the producer for his costs of production, including, of course, his own necessary reward. This is a price which would often be below the actual value of the goods to the consumer. Is it possible to decide whether the price ought more closely to approach value to the consumer or cost to the producer?

Even the two items mentioned are not the same for any two parties. Unless the goods are to be sold at a different price in every transaction, there is no probability that the price can correspond to either one of these elements in full, and there is no likelihood, therefore, that a normal price can be established upon either basis. It is only the marginal consumer who pays a price which corresponds exactly to his own valuation, and there are only certain of the producers who are just barely rewarded for their costs of production. For very many of the producers there is a gain arising from the advantages which they enjoy in the way of lower costs, and which is important enough to have been given the name of producer's surplus. It is a differential in gain over costs due to the fact that some producers have lower costs than others. It is not so clear that there is a measurable consumer's surplus, though, of course, many consumers buy at less than they might have been willing to pay under other circumstances. How much that difference is can never be known until the other circumstances develop, and the consumer himself is seldom conscious of the fact that he has got goods at less than their value. He recognizes the fact occasionally when, as he says, he has got a bargain. But however intangible the gain may be, there is a difference between cost and value to some of the purchasers in all markets where a common price is the rule.

There is a tendency toward uniformity in costs. Producers operating at low cost are inclined to push their production to the point of increasing costs. Those enterprises which enjoy the ad-

vantages of a tendency to decreasing costs have every inducement to expand production to the limit of their capacity. In all fields of production, the less favored are constantly eliminated, either because they fail or because they find it more profitable to turn their investments to undertakings affording opportunities of production which are not so fully developed and which, therefore, are likely to yield them greater returns than their former ventures. For these reasons, there may be at least a tendency for price in normal times to approach the costs of production of a great majority of the producers. It may be said that where enterprises of decreasing costs expand to the point of driving out less favored competitors or where they consolidate in such a way as to effect an actual uniformity of costs, whether monopoly exists or not, costs are an available basis upon which to fix prices, and in public regulation they may serve as a satisfactory basis from the standpoint both of the producer and the consumer. Inasmuch as there is a tendency toward uniformity of costs, we are required to qualify the statement of the preceding paragraph to a slight degree. Nevertheless, our conclusion is that normal price is determined by many causes and is simply that price which develops in the absence of the interference of extraordinary factors.

CRITICISMS OF THE PROCESS OF PRICE DETERMINATION

If there is no way of determining abstractly what normal or fair prices should be, we may turn to the price process itself to see in which of its phases it seems to work out best to the satisfaction of all concerned. Each of the variations of the process appears to have points of weakness which the public from time to time attacks, and each has met with popular favor in one point at least.

Apparently, there is a general assumption that the free-price process is one which works out most truly in conformity with the requirements of economy in the administration of our economic activities. It gives us a price resulting from the free play of variable demand and supply. It is easily discovered, however, that the free play of market forces results in instability of price. The forces change rapidly, and resulting prices are not the same from day to day. Some of the same uncertainty which we have described in connection with changing prices is present in markets where free prices prevail. Though, generally speaking, the

changes in free price are very slight and do not greatly affect conditions of production and consumption, they do have some effect, as is seen in certain consequences, resulting from these prices, in the management of agriculture. The issue of gain and loss to the farmer depends very largely upon his success in anticipating market changes and adjusting his production and selling to the condition of the market. Furthermore, the price variations in the markets for farm products open the way for illegitimate speculation and for all the abuses of gambling in necessary commodities.

There is frequent criticism of markets in which prices may be determined by conditions of fixed or partially fixed supply. Purchasers are held to high price in periods of scarcity, and producers suffer from the necessity of sale at a time when the market is overloaded. There are those, however, who resist the efforts of traders to establish that interaction between one market and another and between present and future markets which would prevent the development of forced prices of just this sort. The idea of complete freedom of trade between one community and another and between one nation and another has had no general acceptance. Many people are opposed to all organized future trading because it enables people to speculate. Speculation, no doubt, has its abuses. It is, nevertheless, one of the alternatives to the fixation of prices in markets where oversupply and shortage of supply are bound to occur from the very nature of the conditions under which the articles are produced.

There is very general condemnation of monopoly. The abuses of the power of those who control demand or supply are so firmly fixed in the public mind that monopoly is seemingly in universal disfavor. On the other hand, the public gladly supports the system of patents and seems to submit willingly even to the abuses of the patent privilege. By means of patents, it is possible for producers not only to secure the advantage of the exclusive sale of their own inventions, but sometimes to purchase and withdraw from the market the competing devices of other inventors, including even those which are newer and better than the ones which are favored by this protection. The public consents freely, also, to many prices approaching monopoly regardless, seemingly, of the great public interest in the commodities controlled.

Objections have been raised to the practice of manufacturers in stamping upon branded articles a price which they require by

contract to be maintained by all sellers throughout the market. By this system of so-called price maintenance, certain commodities are to be purchased at one uniform price wherever they are offered for sale. The fixing of prices in this way prevents reductions sales in these goods and makes it impossible for any merchant to sell them to the consumer at other than the price imposed by the manufacturer. Some retailers and consumers have felt that the fixing of price in this way gives the manufacturer too great a control of the market. On the other hand, it is expected of all dealers in this country that they fix one price which will be the price at which they will sell to all customers. This is the so-called one-price system, and it expresses a policy very firmly supported by the public. It is regarded almost as a fraudulent practice for a merchant to make one price to one person and another to another. It arouses similar irritation if prices are changed too rapidly, and recently, in the purchasing of automobiles, customers have required the assurance that the prices would not be changed within a certain period of time.

It seems, therefore, that the public is opposed at times to the fixed-price process, and yet it requires as a matter of its own interest that prices shall be uniform to all customers, that they shall be somewhat the same from time to time, and that the merchants shall in fact fix prices. Whenever it appears that all the dealers in the market are in agreement upon the price of articles of common consumption, suspicion is aroused and objections are made similar to those against price maintenance. At the same time, people find it hard to understand why one merchant should charge more than another for the same goods, and they require that merchants shall meet the prices of their competitors with some resulting uniformity in the market.

Among the several processes, there is no one that is so nearly free from all defect that it may be said invariably to develop a fair price. No one of them may be said to be the one normal process, and the resulting prices are not to be regarded as normal except in the sense that they may have prevailed for a time.

PRICE REGULATION

The abuses of the market processes and the efforts of the public in general, or of some group of the consumers or producers, to

find a fair price or to fix prices at a point which will meet the needs of the market in normal times leads often to the regulation of prices by the government. Fixation of price works out to exactly the same effect whether undertaken by private individuals or by some social agency. If the price is fixed at such a point that demand and supply will be accommodated, the results will be satisfactory, and the price established will be a true reflection of market conditions. If the price fixed is too high, there will be no demand for a part of the supply, and producers and sellers will suffer a loss. If the price fixed is too low, it may not be sufficient to cover all costs of production, and there may be no sales for the time being and a reduction of supply in the long run. If this latter regulation is undertaken in the interests of the consumer, it will succeed only provided that some means is found at the same time for lowering the costs of production. If a high price is fixed in an attempt to protect or assist the producers, the result will be satisfactory only in case it is possible to stimulate demand.

There are situations in which there are possibilities of helpful regulation in favor of the consumer. At times, goods may be supplied at a cost which is uniformly very low, and yet, because of the competition among the demanders, the price is forced to a point otherwise unnecessarily high. This may have an undesirable consequence in excluding many consumers from the use of the commodity in question. The high price may be due to the exceptional and rather foolish demand of a few people who because of wealth or extravagant habits are put to no need, or do not intend, to economize. Where the article in question is one the consumption of which is of social importance, it may be in the public interest to prevent competition in demand by fixing a price by act of law or by decision of the public authorities.

The possibilities of successful regulation are considerable where goods are produced at decreasing costs. A business of decreasing costs, whether a monopoly or not, may be regulated in the public interest with less danger of a resulting undersupply than would ordinarily be the case. If the article in question is a necessity and widely used, the lower prices will tend consistently to increase sales. If the concern increases its production to meet the greater demand, it thereby so lowers its costs per unit as to be able to sell profitably at the new low rates. It is such a possibility as this that underlies the regulation of municipal utilities and

other public service concerns, including railroads. Of course, there is a point at which regulation will have its unfavorable effects. If the market is already saturated, the reductions in rates will not increase business. It may be, also, that a regulated concern is operating to its full capacity at the time rate reductions are attempted, so that it is able to accommodate no additional demand. In such circumstances, a new price fixed by the authorities might reduce income below the cost of production and have disastrous results. The regulated concerns constantly disagree with the authorities as to the exact extent to which new and lower rates will increase business and make possible more economical production.

It occasionally happens that the necessity arises for the regulation of prices in protection of the sellers themselves. They, likewise, may be inclined to carry competition to such lengths that prices fall below costs of production, even though the state of the demand would warrant much higher rates. The competition of concerns of decreasing costs often goes so far as to involve the complete destruction of the enterprises concerned. The railways at one period in their history engaged in this so-called cutthroat competition. Competing railways with a capacity beyond immediate needs were in a position to profit by every possible increase in business, and the more nearly their equipment was utilized to the full, the more profitable the business would be. They could gain this increased business by attracting it from other roads. They lowered rates, therefore, with the idea of gaining business in such amount as to justify the lower rates and lead also to higher profits. Roads subjected to this competition found it better to hold their patronage, even at some loss, than to operate without business at all, for they had many fixed charges which would continue no matter how small their traffic became. Something in the way of an agreement on rates was the inevitable result of such a situation. The outcome might have been monopoly, in which case the public would have needed protection, or, in the second place, the government might have intervened and set a price to protect the companies against their own competition. The rate wars were ended by government regulation, and a provision of the Transportation Act of 1920 authorizes the Interstate Commerce Commission to fix minimum railway rates.

There may be some necessity for the regulation of prices where

there is an especial opportunity to oppress the buyer. The regulation of this matter and those regulations which are aimed at the correction of particular unfair practices in the market call for especial consideration in a later chapter. The preceding discussion has been intended to show how government regulation may assist the market and what consequences it may have in view of the law of price, which is our present interest.

MISCELLANEOUS VALUATIONS

While the valuations made by the consumer and other buyers and the prices of the market are the principal economic measurements of goods, there are other valuations required in economic activity, and it is important that we have some knowledge of the processes by which these measurements are made and of the points in which they differ from those to which we have given our attention in this and the preceding chapters. The buyer and the seller appraise everything upon the basis of its income-producing power. It is this that underlies the consumer's valuation of the goods he expects to acquire and also the seller's calculation of the price to be asked for goods he is to offer in trade. The one is thinking of real income and satisfactions, and the other, of a cash income to be converted into satisfactions. However, in connection with many of the activities of business it is important to be able to make comparisons between, and to keep records of, goods which are not to be purchased or sold. The enterpriser, the accountant, the public authorities, and others approach the problem of the measurement of goods, therefore, with considerations in mind which are different from those that govern buyer and seller, and their evaluations have results which do not correspond in all cases to market values.

The capital of a productive undertaking is often to be measured for the purpose simply of keeping a record of the initial outlay made in the establishment of the business and such succeeding expenditures as constituted investments. In such instances, it is satisfactory to keep a record of the original cost of the buildings, the equipment, and the stock of materials intended for productive use. Such an evaluation of capital goods may be of service to the accountants in cost keeping and to the enterprisers in determining what the relation of profits is to the actual invest-

ment made in the business. It may be of assistance to the government in regulating the concern's income. If it is desirable to know how great the investment would need to be if the concern were to be newly established upon the same basis, an estimate of its probable replacement, or reproduction, cost would be in order. It might be very important to have such an evaluation in case the capital were completely destroyed or very greatly damaged. Reproduction cost corresponds, of course, to current purchase price, though it by no means indicates the rate at which the capital on hand could be sold. Even new equipment is "second-hand" when offered again in the market. The results of these two processes of measurement may be almost identical if to original cost there are added and subtracted proper amounts respectively for appreciation and depreciation, and from replacement cost there is deducted a sum which measures the difference between the condition of new capital goods and those actually in use. Appreciation is seldom anything more than reflected market values, but depreciation is a fact capable of very exact calculation.

In our description of the property rights of corporate shareholders, reference was made to the fact that their interests were subject to more than one process of valuation. The book value of a share of stock is based upon some such an estimate of the worth of the assets of the corporation as we have described in the paragraph above. It is the result of measurement of the worth of that part of the total assets which may be attributed to each share of stock. In addition, the share may have a face, or nominal, value indicating simply the percentage of the total assets to which the owner is entitled, and, finally, a market value upon the basis of which the owner's interest might be sold. The latter depends, as is the case in all market values, upon income-producing power.

Appraisals of goods for the purpose of taxation are based upon a somewhat arbitrary standard, set generally by the tax assessor. The standard is sometimes related to market values and sometimes is calculated as a definite discount from what that value may be supposed to be. In some instances the scale of assessments is very independent of every other valuation and arises out of a comparison of good with good upon the basis of former appraisals or some fixed point of initial assessment otherwise determined. For purposes of condemnation when private property is to be taken for a public purpose, it is possible to have the appraisal made by a

jury, which may take into account all the inconvenience and damage to the seller arising through the involuntary sale.

There are occasions when it is desirable to know the value of a business enterprise itself. It is a source of income and a thing that may be transferred from one owner to another. Its success, and not its value, is to be measured by the profits it has yielded to its owner. It is not a good in the strict economic sense, and its income-producing power depends often very largely upon its proprietor. It is not possible to attribute the income entirely to the business or at least not to its transferable elements, and the record of earnings alone is not a satisfactory basis, therefore, upon which a buyer may make an estimate of its probable productivity after transfer. It is necessary, consequently, for those attempting an evaluation of this sort to undertake an analysis of the various assets of the enterprise, both tangible and intangible, as a means of determining the worth of the business itself as distinguished from the success of its proprietor.

To the value of the physical assets something is to be added for that element of opportunity known as good will, if there is any, and something for every contribution which has been made to the organization of the undertaking and to its establishment in the market. The business is something more than its separate physical parts and more, even, than these parts assembled and ready to operate. It is the concern actually operating. There are various costs involved in putting the concern in motion, assembling its labor force, making connections with other business concerns, and drawing to it its initial customers. All these costs are incidents of the creation of the business rather than of operating it subsequently, and the expenditures, once made, are of lasting consequence. They enter, therefore, into the very constitution of a going enterprise and are an element of value which we call going value. The several items of value, added together, constitute the total value of the business. The result may be very far from the amount of the investment which the records show to have been made in the enterprise, and it may not correspond to earning power under all conditions. The process of valuation is one devised to meet the peculiar difficulties of economic measurement in certain circumstances and for the one purpose only, and it differs from other processes, accordingly, both in method and in results.

ECONOMICS

PRINCIPLES AND INTERPRETATION

PART IV

MONEY AND CREDIT

XIV

THE NATURE AND FUNCTIONS OF MONEY AND CREDIT

The standard of value. Requisites of satisfactory standard. Fiat standards. The medium of exchange; primary requisites. Secondary requisites of a satisfactory medium. Metallic money. Deferred payments. Credit. Credit instruments. Paper money. Irredeemable paper money. The definition of money.

THE measurements which are to be made by buyers and sellers could be made, if necessary, by a comparison of the goods under consideration in each instance with every other commodity which the buyer might care to utilize or which the market conceivably might offer a seller in exchange. But it would needlessly complicate the processes of valuation and price determination to make measurements in that way. If that were the accepted method, the calculations made by the consumer seeking to purchase goods would involve innumerable comparisons between commodities offered for sale, and the price quotations of the seller could be made only in the form of long lists of exchange ratios. Prices quoted in terms of one good alone would be unintelligible to a buyer who had no use for that particular good and had made no estimate of its utility. Even a long statement of exchange ratios would be inadequate to meet the needs of all buyers; and even if such a statement were adequate, its various ratios would carry different meanings to each prospective purchaser, and there would seem to be several prices rather than one.

THE STANDARD OF VALUE

The difficulties just mentioned are obviated when values are all expressed in terms of some one commodity which is generally accepted as a basis of measurement, or standard of value. The consumer can then estimate the relative importance to himself of any one good as contrasted with all other goods simply by comparing it with the one commodity which he uses as a standard and by means of which all other goods also can be measured. Prices

can be quoted in the market in language intelligible to everyone by expressing them in terms of this one commodity, whether it is that very commodity or only its equivalent that is to be used in making payments.

How very generally the need for a standard of value was felt in the economic experience of the past, and how early the use of a single good as a basis of measurement began, can be gathered from the names of commodities which to our knowledge have been used for this purpose. The list suggests every climate and every mode of life. It discloses the fact that standards of value have been used by people in every part of the word, in every stage of civilization, and at every period of the world's history. It indicates also how varied are the goods that may be found acceptable as standards. An incomplete enumeration of the commodities used as standards of value at different times follows:

beaver skins	beeswax	sheep	nuts	pearls
marten skins	whales' teeth	tobacco	shells	gold
leather	precious stones	wheat	coal	silver
feathers	ivory	rice	nails	copper
cotton cloth	fish	salt	bone	lead
straw mats	cattle	tea	stone	iron
wampum				

Some of these materials were formed into units of convenient size. The metals, in particular, were made into cubes, coins, or curiously shaped blocks. Some of the commodities enumerated were used as standards by the ancestors of the peoples of the western nations and by other primitive people of prehistoric times. Some were used by the Indians of North America and some by the early white settlers of this country. Others were the standards of the advanced nations of Europe and Asia in early times. The list includes the standard commodities of all peoples of commercial importance at the present time.

REQUISITES OF A SATISFACTORY STANDARD

The first requisite of any standard of value is that it have value itself. No one may measure the value of one thing by comparing it with another that has no value. Only an economic good or service, therefore, may be used as a standard; but any such good

or service may be so used by those among whom its desirability has been definitely established.

It was a characteristic of the historic standards of value that they were commodities of common use and, therefore, of widely known and generally recognized utility. Only such goods were capable of employment as common standards. While the individual consumer for his own purpose alone might have used as a standard any commodity which he had frequent occasion to consume and upon which he could maintain a consistent valuation, the great need was for a generally acceptable standard with which to simplify the quotation of prices and reduce the complications of exchange transactions. The essential quality of the early standards, therefore, was that they had personal or direct value to many people and, consequently, at least a trading value to practically every one.

Since the need for, and the chief service of, the standard of value is the same now as formerly, the commodity to be selected as a basis of measurement in the present economic system must likewise be one of general desirability for ordinary purposes. This is necessary in order that it may possess the quality which it is to be the means of measuring and in order that the degree to which it possesses that quality may be known through utilization or trade to all who are to employ it as a standard. The fundamental requisite of a satisfactory common standard of value is that it have value to many people.

However, it is not necessary, for the purpose which the standard is intended to serve, that all who make use of it as a commodity put it to exactly the same use nor place the same valuation upon it. It may serve as a standard as well if it has many utilities, and it is most likely to be widely desired and have actual value to many people if it is capable of serving a very great variety of wants. The standard may, in fact, constitute a seeming necessity to some and a luxury to others, with the result of a wide difference in the importance attached to it by the different members of the community. It is not to be expected that all people will place the same value upon any one commodity, and we could have no standard at all if there were such a requirement. Any good is capable of being put to the particular use now under discussion if it has in fact some definite value to every one.

Yet it is better if the standard represents as nearly as any com-

modity may the same value to all who are to make use of it. A commodity which has a uniform value among all the people, whether it is used for a single purpose or for many, is a better standard than one lacking this quality, because it enables those quoting prices and those considering quotations to comprehend in full what the prices mean to one another. There is an advantage in having a standard of such a character that the mention of one of its units brings to the mind of every one exactly the same objective reality and, as nearly as possible, the same subjective desirability. This second quality of uniformity of value is to be secured in a practical measure by the selection of a good which is of uniform physical composition and quality, and of which all the units are very nearly or exactly alike.

It is desirable for the sake of perfection in the standard, not only that it be a commodity of uniform value throughout the market at any single time, but also that it be one possessing such economic stability that its market value does not vary from one time to another. While stability is not an absolute requisite of a standard, its highest usefulness is to be attained only in those circumstances in which it has a definite market value which is not subject to great variations with changing circumstances. Therefore, an article consumed in comparatively regular quantities and so fixed in use by custom or personal habit that it makes the same appeal to the consumer at all times is one better suited to the needs of trade than one which requires to be reinterpreted in every succeeding transaction.

The assurance of stability depends not only on the character of the demand, but also upon the conditions of production and the physical qualities of the good itself. The standard should be a commodity which does not quickly deteriorate and one the units of which are invariably of the same grade at whatever time and in whatever place produced. An ideal standard would be one capable of being produced in just such quantities as are necessary to keep the market supply properly adjusted to the market demand.

Finally, the commodity chosen as a standard serves the purpose of the market best if it is capable of being divided into small units. The standard must be adapted to the expression of the value of any good or service which enters into trade, and, to be perfect, it must be capable of conveying the idea of value very accurately. It is easier to comprehend prices and other values which are ex-

pressed in multiples of a small known unit than those that are expressed in fraction of something not capable of being divided and not used in small quantities. One may easily understand a value expressed in terms of several small pieces of metal which can be combined to many uses or which are sometimes used by the consumer in units as small as those employed in making valuations, but it is very difficult to understand a value expressed as one one-hundredth part of an ox, as may have been necessary among the primitive people where beasts of burden were accepted as the standard.

It is obvious that some of the commodities mentioned above do not conform to all the requirements of a satisfactory standard, but it must be remembered that some of them were the standards of early peoples and were imperfect partly from physical necessity and partly because the trade of the times was not so extensive as to lead to careful attention to the measurement of value.

FIAT STANDARDS

In returning to the consideration of that first and essential requisite of the standard, that it have a known value, it is well to recognize the fact that all the standards which have actually been used in trade have consisted of some commodity capable of some such utilization as other goods. The name of every standard in use today refers to a unit of some good. Thus, the American dollar is not simply a name abstractly expressing value, but it is the designation rather of a certain quantity of the commodity gold. No matter how the word is used or upon what commercial document or instrument it may be stamped, it refers to, and expresses the value of, that quantity.

In fact, it is not possible to create a common measurement of value simply by coining a word and stamping it upon pieces of paper or otherwise putting it into the language of trade. Such a word would convey no meaning to those who were expected to use it unless it signified some value with which they had become familiar in their experience as producers and consumers. In other words, it would need to relate specifically to the value of some commodity which the people had had the experience of measuring. If the government were to create a new standard of value called, say, the zephyr, the value of "ten zephyrs" would

mean nothing to anyone, since the expression does not refer to an economic good and is foreign to, and has no interpretation in, any existing value. Such a standard as that to which we have just referred is called a fiat standard, since it is a standard commanded and set up by the authority of the state and not one arising out of trade or other economic activity itself. The explanation of its failure as a standard lies in the fact that values cannot be measured by comparisons with things that have no value. Fiat standards, in so far as they do exist, are expressed generally in some form of paper money.

Those who make use of standards of value, and more especially those who make use of the name of some standard, are not always clear in their own minds as to the fundamental basis of measurement and as to the meaning of the terms in which they express values. Some things in their experience might easily lead them to suppose it to be possible to get along with purely nominal, or fiat, standards. It is probably true that the word "dollar" as used in the United States suggests to many people a dollar's worth of very many different goods and has no reference to gold at all. The consumer does not always stop to think of, and in some cases does not know of, the gold which is the fundamental basis of comparison, because he has learned of the standard only by observing what has generally been considered its equivalent in various goods, just as he has learned how much a bushel is without thinking or knowing of the standard which defines a bushel. Having once interpreted the dollar, he turns his mind to the things he expects to buy and does not repeatedly return in his thought to the standard of value. In all such cases he is governed by the actual standard of value nevertheless and does not depend, as he may suppose himself to do, upon an abstract idea of value.

By reason of such situations as this, however, it is possible that there could exist for a time the idea of value which the standard had originally conveyed, even though the standard commodity itself had ceased to be used or to exist. Though the people had forgotten entirely the original basis of measurement, they might maintain for a time a consensus as to the value which the name of the standard had originally expressed. But after a while, such confusion in valuations would result from this situation as would develop in linear measurements if everyone made his own yardstick. Variations in the concept of the standard of value would

arise and there would be no commodity upon which a correcting comparison could be based. When the idea of the standard ceased to have uniformity, there would be no common standard, since some would be measuring by one scale and others by another. It seems to be the fact that those standards which are sometimes supposed to be fiat standards and which are expressed by means of paper money issued by the authority of a government are not actually fiat standards, for they bear the name of some previously used commodity standard or they make mention of some substantial basis of measurement to which people can always relate them when trying to give them exact definition for use in trade.

It may be said by way of caution that this discussion of fiat standards has no reference at all to the paper money now in use in the United States. The paper money of the United States is not intended to serve as a standard of value.

The standard of value serves the needs of those who make contracts which relate to services as well as those who buy and sell goods. It is the instrument of the producer and all those with whom he deals in giving definiteness to their agreements with regard to wages and other expenses of production. The standard of value is a standard to be employed, not only in transactions to be completed in the present, but also in those which involve deferred, or future, payments. The importance of the use of the standard in deferred payments is to have our especial attention in another chapter.

THE MEDIUM OF EXCHANGE; PRIMARY REQUISITES

Even with a standard of value established so that measurements can be made and rates and prices agreed upon, there remain other possible difficulties in the making of payments which may prove a hindrance in the conduct of trade and in the administration of production. When trade is by barter, the buyer pays with whatever goods he may have which the seller will accept. If he cannot offer something that is the exact equivalent of the other's goods, it is generally impossible to effect a trade. So seldom does one with goods to dispose of require the exact thing that another has to offer that there is little exchange by this direct method. It becomes necessary, therefore, to provide some medium of exchange by which an indirect payment may be made possible. If a seller

were to accept in payment from a buyer any article the latter offered, with an idea of trading it to someone else for the article really desired in the first place, the transaction would exemplify indirect payment in its simplest form. If there were, however, some one commodity which everyone was willing to accept in payment and which the seller knew he could always dispose of in trade elsewhere, such an article would constitute a true medium of exchange, and payment would come to be made by the indirect method almost altogether.

In a developed economic system there must be some instrument of indirect payment which will make possible the indirect transactions to which we have referred, and which will meet adequately all the requirements of a general medium of exchange. The medium of exchange ordinarily must possess certain qualifications to serve satisfactorily as a means of payment. In the first place, it must be something that is accepted in trade, and it should be as nearly universally acceptable as possible. Traders must be able to depend upon the possibility of completing all transactions by payment in the chosen medium, and though in certain circumstances a part of the medium need not be of universal acceptability, some part at least should meet this qualification in full. The medium which has a high degree of exchangeability is a means of facilitating trade to an extent that an instrument of payment which is constantly challenged and occasionally rejected cannot be. A measure of acceptability is the first requirement in the medium of exchange, and universal acceptability is a desirable quality.

Acceptability is based upon certain other qualities which the medium may generally be expected to possess. The medium ordinarily will have no acceptability at all unless there is in it or back of it some certain value upon which its possessor may realize when he desires. The medium is necessarily, therefore, either a commodity having value in itself or the promise of someone, upon whom the traders rely, that something of value will be given for the instrument of payment used upon its presentation at the proper time and place.

Some have thought that it might be possible to bring into use a paper medium of exchange without substantial value in it or back of it. This money would be issued in some such form as the paper money now current in the United States (all of which,

however, is redeemable). It would, supposedly, be so readily exchangeable, even in the absence of any promise of redemption, that it could always be disposed of in trade and would be universally acceptable. The people, it is thought, would find sufficient assurance that something of value would be given for the medium, once it had come into use, in the very fact that it was being accepted in trade. In other words, its established acceptability would give it further acceptability. But in the beginning, before it was so generally accepted, and in the end, when by some chance its power to command other goods in exchange was doubted, there would need to be some ultimate resort to which the holders could go for the conversion of the paper into goods. People do not want the instruments of exchange which we call money except for the purpose of securing the things which the money will buy. Whenever they are convinced that the paper offered them will buy goods and services, it is very acceptable, and as long as they do not doubt that it will be redeemed in goods either by the one who issued it or by someone else, it may circulate and serve as a common medium of exchange. Paper money may circulate, therefore, even when all of the power to redeem which once lay back of it has disappeared. But if the people come to understand, or for that matter only to suppose, that the medium constitutes no substantial and enforceable claim against anyone, it invariably ceases at once to be acceptable in payment of goods. The conclusion is that while acceptability may be based upon an error or a false hope, in the long run, in an intelligent community, the medium of exchange must contain, or be redeemable in, goods which the holder of the medium can command and put to his own use.

SECONDARY REQUISITES OF A SATISFACTORY MEDIUM

While the acceptability of the medium of exchange depends primarily upon either its intrinsic value or its redeemability, there are certain other qualities which determine very largely the extent to which the various elements of the medium may be expected to meet satisfactorily the requirements of trade. These qualities result more in making money an instrument of great convenience than they do in giving it fundamental exchangeability, but in an indirect way they have an important bearing upon its actual ac-

ceptance in the making of indirect payments, and since they contribute a very desirable and essential utility, they are requisite to the highest development of the medium of exchange.

In order that the medium of exchange may be most serviceable to trade, in the first place, it must embody or represent definitely known and accurately expressed values. Buyers are unwilling to give, and sellers to receive, in trade one of the elements of the medium unless it is possible for them easily to ascertain its value and determine to what goods it is practically equivalent. If the medium itself is not some well-known commodity, the value expressed on its face must be that of some good with which all are familiar. Obviously, the commodity which is used as a standard of value is likely to be of such a character as to meet this requirement. In the second place, it must be possible to prepare the medium of exchange for use in such form that its different units, singly or in combination, may directly represent any amount practically required in the making of payments and may be used easily and conveniently both in major and minor transactions. In the third place, the medium must afford a convenient and safe means of preserving and transmitting from hand to hand the purchasing power which it represents. While money is no longer used to any very great extent as a means of storing or hoarding wealth, or, as the economists once expressed it, as a store of value, it still is the embodiment of purchasing power. The material of which the medium is made must be reasonably durable and not subject to such deterioration as would result in loss of value. The instruments of payment must be of such form that they may be stored and transported easily and inconspicuously. The physical qualities and aspects of the medium must be such that units of various denominations may be recognized without difficulty and their values ascertained by sight or touch without the exercise of extreme care.

The convenience or inconvenience of the medium of exchange in the conduct of trade is not determined by its physical qualities alone, however. The method by which it is prepared and issued for use and the system by which its distribution and circulation are controlled are effective and important in determining the amounts available in the market and the extent to which these amounts are adjusted to the needs of trade. There are to be mentioned, therefore, two particular qualities which belong to the

economic character of the medium rather than to its material composition. One of these is the quality that makes for rapidity in circulation. The rapidity with which a properly constituted medium of exchange passes from hand to hand depends, of course, partly upon the paying habits of the people and upon their customs of trade. Circulation may be facilitated, consequently, by the establishment of banks, and by the promotion of new methods of payment. However, the form and character of the currency itself have an important bearing upon rapidity of circulation.

The second economic quality is that of elasticity, or the capability of expanding and contracting in quantity in adjustment to the needs of the market. If instruments of payment can be prepared and issued only at stated intervals or only after much legislative or other deliberation, or if the quantities in circulation are permanently fixed, the medium of indirect payment is inelastic, and its quantity frequently fails to correspond to the number of payments to be made. An adjustment can be made then, if at all, only by a change in the rapidity of circulation. The medium of exchange should be capable of expansion, or increase in amount, as periods of activity in trade call for its more extensive use. It should be possible also to withdraw such part of the medium as is not required in periods of inactivity. How the currency may be made elastic is a matter which will be made clear as we discuss the forms which the medium takes in the present economic system.

METALLIC MONEY

It is desirable to find some commodity which will serve both as a medium of exchange and as a standard of value. The medium of exchange, in any event, is to be valued in terms of the standard in the same way as are the goods which are to be traded, or else much of the advantage of a common basis of measurement is lost. Thus, if it were customary to measure values with wampum but to accept beaver skins in payment, the latter goods, as well as the goods which were the object of trade, would need to be regularly quoted as the equivalent of so much wampum if wampum were to serve the full purpose of a standard. Practically, therefore, the medium must at least represent certain definite quantities of the accepted standard, and if the language of trade is to be the language of the standard, these amounts must be

stamped upon the units of the medium. In the early development of trade, it greatly simplified the making of agreements to price goods in a certain commodity and to take payment for the goods in that very commodity. There is still some convenience, under certain circumstances, is using one commodity for the two purposes.

It is generally possible to find a commodity in common use which is suitable for both the purposes now under discussion. That commodity which is best known and most stable and uniform in value and, therefore, most satisfactory as a standard is likely to be the most acceptable in trade and the most suitable as a medium of exchange. If the commodity is one in which all degrees of value may be expressed, it is likely to be divisible into units of suitable size for use in actual exchanges. The metals are found to have the qualifications mentioned and to correspond in practically all other points to the requirements of convenience previously enumerated. The precious metals, in particular, are universally desired and used. They are divisible into units of any size and have relatively great value in small compass. The various particles of these metals are almost absolutely identical, no matter where or at what time produced, and they are subject to practically no deterioration. Their appearance makes them easily recognizable and they are capable of being coined in ways to make counterfeiting difficult. For these reasons, all advanced nations and many primitive peoples have made use of gold, silver, copper, and, occasionally, brass and nickel in their monetary systems.

Experience has shown, however, that the metals do not possess all the qualities of a satisfactory medium of exchange, and it is necessary, under some circumstances and to meet particular needs, to devise certain other forms of currency. The explanation of the non-metallic currency in actual use requires that we have in mind first a definition of credit; and, in order that we may better understand credit, we shall digress briefly to take an account of payments in which time is an element.

DEFERRED PAYMENTS

Not all indirect payments are of immediate consummation. When some quantity of the medium of exchange is given in trade by a purchaser of goods or services directly upon receipt of the

goods or services purchased, the payment is intended to be immediate, and it is so from the standpoint of the two traders, even though the seller may delay the actual use of that which he has received in securing the goods finally to be consumed. Such a transaction may properly be said, therefore, to involve immediate payment. But sometimes the buyer is not able to offer an immediate payment of any sort, and it may be arranged for his convenience that he need not do so but may pay later. A different transaction results then, and there may be said to be a deferred payment for the goods purchased.

The privilege of deferred payment is often the equivalent of a loan to the buyer. This is true whether the buyer receives goods and does not pay for them at once or receives, instead, the means of buying goods upon his promise later to repay the one who has thus favored him. In either case, there is a direct or an indirect transfer of goods to the borrower for which he is to make a deferred payment. There are other deferred payments, however, which are not of the nature of loans. Wages and salaries are paid at intervals after there has been delivered a specified amount of service. This is not because the laborer intends to lend his services for a time without payment, but because it is convenient to all concerned to pay, or to allow payment to be made, for such things in the aggregate rather than upon the delivery of each installment. The interest paid upon long-standing loans, likewise, is settled only occasionally. Between these deferred payments and loan transactions proper, there is no clear line of demarcation. One may pay his grocery bill by the month simply for the sake of convenience, but in many instances such bills are handled in the same way that they would be if each were a postponed payment in a single transaction of purchase and sale. So far as the act of payment itself is concerned, there is no difference at all in any of these deferred payment transactions. However, there is generally this difference in the amount of the payment to be made that when a loan is involved: the payment of a premium, or interest, is required in addition to the price of the goods bought or the accommodation given.

Those deferred payments which are loan repayments are to be divided also into two not very distinct classes. In the first class belong those payments resulting from loans made to an individual simply because he is unable, or finds it inconvenient, to make pay-

ment at the time the transaction takes place. It makes no difference in this case whether he receives goods to be paid for later or the means of buying goods, which means are to be returned in kind or equivalent. Such a loan does not constitute an investment, because there is no expectation that it will be the means of increasing production and yielding an increase in goods, even though the borrower is required to pay a premium upon the loan, which is called interest and which corresponds exactly in amount to that cost of production which we have previously called interest. The transfer of funds under such circumstances is an investment, if at all, only in the acquisitive sense.

The second class of loan transactions embraces those that involve investments of capital on the part of the lenders through the agency of the borrowers. Thus, equipment may be sold to a concern in exchange for notes or bonds, or people may lend to the same concern the means of buying the equipment and receive the promise of a later payment of the principal with interest. Convenience and investment loans are indistinguishable in numerous cases. When wholesalers sell to merchants goods on deferred payment, the former are enabling the latter to stock their enterprises with capital, though such a short deferred payment as transactions of this sort generally call for would not be regarded as an investment by most people who have surplus funds to be put to use.

Direct Payments:
- Payment in goods

Indirect Payments:
- Payment in the medium of exchange
  - Immediate payments
  - Deferred payments
    - Convenience transactions
    - Loan transactions
      - Non-Investment loans
      - Investment loans

Figure 28: Methods of payment and the transactions involved in deferred payments.

In the further discussion of the matter of payments, it may be convenient at times to refer to immediate indirect payments simply as indirect payments and to deferred indirect payments simply as deferred payments. We shall also ignore those deferred payments which are for convenience only except in the discussion of

the effect of changing prices. Deferred payments may be assumed to refer, therefore, to loan transactions alone, unless otherwise indicated.

CREDIT

Credit is the power to command goods without immediate payment. It is a means of acquiring goods and is an essential element in many, and in fact in most, deferred payments. It is a factor in all loan transactions, and sometimes also in convenience postponements. The one who possesses this power of commanding goods is said to have credit or to have good credit. The one who gives him the privilege of exercising the power becomes his creditor. A simple credit transaction arises when one buys goods without immediate payment. In a slightly more complicated transaction, one borrows the means of making a payment from a bank or from some other person who is in a position to supply him with money. One may use his credit even by borrowing the credit of another person. When so doing, the borrower, instead of receiving money at once, is allowed to make use of the name of the other in obtaining goods without immediate payment.

As we are to use the word "credit," it will generally imply that payment is to be made in the future. As it is used in some business transactions, it indicates a payment made previous to the acquisition of the thing paid for. Thus, when a farmer in the old days went to the store with a basket of eggs, the merchant gave him "credit" on the books for the eggs. That procedure entitled the farmer to receive goods from the store without further payment. In popular speech, we give one credit for something already accomplished or attained when we think he is entitled to gratitude or, at least, to our favorable opinion. In both of these cases, performance, or payment, is made first by the one who receives credit, and the reward follows. In bookkeeping practice, one is credited with the payments he makes to the concern whether they are made before or after the goods are received. It appears, therefore, that bookkeeping practice also is not in full conformity with the use of the word "credit" that we are to adopt. But it is interesting to note that all the uses of the word may have had something in common to begin with and that the divergence in meaning now is only in the matter of the time of payment. The books of a con-

cern may show that a buyer is receiving goods without immediate payment, and it is necessary to make a record of the fact regardless of the circumstances under which the privilege has arisen. In our use of the word, credit refers to the power to receive goods (or the means of buying goods) with the privilege of a deferred payment in completion of the transaction.

CREDIT INSTRUMENTS

Since all deferred payments require an ultimate settlement, some record must be kept of the transactions involving deferred payment, as has already been suggested. The simplest method of keeping such a record is to make an entry in the books of the seller and in the separate records or accounts of the buyer, or both. This method has its drawbacks but is still used in transactions between retailers and their regular customers and elsewhere when the parties are known to each other and their trading relations are continuous. In other cases, some written acknowledgment of indebtedness is given by the buyer to the seller. This acknowledgment may take the form, for instance, of a promissory note, which is a simple promise to pay. The acknowledgment of indebtedness is to be called a credit instrument.

When the time comes for payment, the debtor may make settlement directly with money or he may order someone else who is in debt to him to pay the creditor. If he chooses the latter procedure, he presents the order to the creditor, who in turn presents it to the third party who is expected to make the payment. This is what happens when one makes payment by check on a bank. By making a deposit in the bank, the depositor puts the bank in debt to him and he may then, by means of the check, order the bank to make payment to those from whom he has bought goods. The check is a credit instrument because of the credit relation between the bank and the depositor, though the check itself may be used to make immediate payment to a merchant.

There are many forms of credit instruments and many ways of using them, which will have our attention later. The instruments have been introduced at this point only that we may take account of them as a means of payment. Notes and checks do not constitute final payment in ordinary business affairs, since, of course, they themselves must be paid off sooner or later. The final settle-

ment is made in the form of goods, as is true in all instances of indirect payment, and there may have been also an intervening payment in metallic money or other currency between the issuance of the paper and the final payment in goods. But, as a matter of fact, notes and checks may be passed about through many hands, and they do serve as a medium of exchange and as a substitute for metallic money. It may be some time before they need to be converted into another form of payment. It may even happen that a credit instrument which one has given in payment for certain goods presently comes back to its source as a payment for other goods. In that way, a series of transactions may be settled by credit instruments without the use of any other means of payment at all. These instruments, therefore, which are primarily an acknowledgment of debt and an evidence of credit transactions with their attendant deferred payments, serve as a means of immediate payment. They not only serve the needs of those that created them, but become also a medium of exchange for many others. They even carry certain advantages as a medium and are superior in some ways to metallic money.

One of the advantages to which we have just alluded lies in the elasticity of credit instruments. The amount of this currency which exists at any one time can be made to depend, and generally does depend, entirely upon the need then existing. These instruments can be created instantly upon the development of transactions requiring their use and can be paid off and cancelled as quickly as the transactions are completed. There need be no lack of them, then, if the people engaged in trade where they are to be used are in a position to make payments at all, and there need be maintained for the purpose of making payments no idle money requiring custody and safekeeping as would be necessary if it were not possible to use credit paper.

A second advantage in the use of these instruments as a medium of exchange is to be found in the fact that such credit instruments as arise out of the ordinary transactions of trade may be made of any denomination. They may express fractions and may be used to make payments of odd amounts. Furthermore, several separate notes or checks can be combined with little or no formality into one larger instrument. Credit paper is relatively safe also, because, though the mechanical process of counterfeiting is much easier and there may be changes and alterations with less effort

than in the case of metallic money, there can be no wholesale counterfeiting. Again, paper may be carried about and sent through the mail with less risk of loss than is involved in the transportation of metal. Finally, since credit instruments are often created only at the very time of use, there is less chance of their falling into the hands of people who have no title to them. The personal identification required for their payment also stands in the way of their improper use.

On the other hand, credit instruments are in some ways inconvenient and unsatisfactory. They may be accepted safely only when issued by those of known responsibility, and the necessity for the personal identification of the one using them in making payment or cashing them makes them less dependable than metal and impairs, in a measure, their exchangeability. They are acceptable, consequently, only for very limited circulation. The time and trouble it takes to draw them is sufficient, also, to destroy almost entirely their utility for very small payments. A system of banks or similar institutions is practically necessary, finally, to assist in their circulation if they are to be very extensively employed in business.

PAPER MONEY

The limitations on the use of credit instruments can be overcome in part if they are created by one whose willingness and ability to pay is relied upon by all. They may thus be given universal exchangeability and become in fact money. Financial institutions such as the banks of modern nations have been able to issue notes which have been circulated widely, and, we may add parenthetically, in some countries there has been a similar private coinage of metallic money. But as a matter of fact, experience has shown that the government is generally most able to offer satisfactory assurance of redemption, and its promise is likely to be more universally acceptable than any other. Even the banks have not been altogether successful except as they have issued notes under the authority of the government and subject to its regulation.

The use of paper money does not arise, however, simply from a recognition of the advantages of credit instruments. It often begins in the attempt of the government to borrow money or to make use of its own credit. Thus, the government may issue its own

promissory notes in exchange for the supplies which it needs to purchase. A second source of such instruments arises from the fact that there are gains to an individual who, in borrowing, can issue his own note without date of maturity to circulate widely as money. Such a note would come back for payment only after a lapse of some time; and if it were a non-interest-bearing note, the borrower could continue his loan indefinitely at no cost. It was this opportunity for gain that tempted the banks to undertake to issue notes for general circulation in the early days of American national history. There is some such advantage to the banks in the issuance of notes under government regulation today, though the gain to the banks in recent years has actually been negligible.

When credit instruments are prepared for general circulation, they lose some of the qualities that otherwise make them desirable as a medium. They become more expensive to prepare, though, of course, still very inexpensive as compared to metallic money. They must be put out in units of fixed denomination, as must metallic money, and they are less convenient in some ways, consequently, than are private instruments. The quantities that may be issued are limited, and since they cannot be issued at will nor withdrawn from circulation as promptly as private paper, they are less elastic than the latter.

IRREDEEMABLE PAPER MONEY

Paper money is found to be in conformity with the primary requisite of a satisfactory medium of exchange only in case it is redeemable in a certain amount and at a definite time and place. Credit instruments are to be regarded as such only when they express in some form or other the obligation of someone to pay; and they are accepted only in the belief that they can be converted either into the standard commodity or the equivalent in other goods. It is true that credit instruments, even in the form of money, have been accepted in trade and have circulated without having full value back of them. There may be many things in the circumstances under which this has taken place to explain it without in any way detracting from the principle that such paper should be supported by a valid promise and in the long run can be kept in circulation only when so supported. The value of the medium of exchange cannot be based permanently on an error in the

minds of the people, and if they accept a paper issue, either because of its similarity to an earlier issue or for other reason, on the assumption that it contains a promise which it does not contain, or if they accept paper money in ignorance of the fact that the government is unable or unwilling to redeem it in spite of its promise, they may be expected ordinarily promptly to reject the currency on discovering their mistake.

In times past, however, people have, in fact, accepted paper money carrying a promise which they realized might never be performed. Being in need of a medium of exchange and having no other, they accepted government notes at a value. But this value was based upon the possibility and probability of the fulfillment of the promise at some time or other, and the value fluctuated with the rise and decline of the hope of redemption. All currencies have disappeared entirely when the governments that were expected to redeem them went out of existence, and no paper currency has long circulated at par except when immediately redeemable. But even a medium issued by the government without any promise to redeem, and known to the general public as a medium unsupported by such a promise of redemption, will be acceptable at some value if the people believe that the government will, nevertheless, redeem it in the course of time. They may expect a change in the constituted authorities, and they may hope to bring about changes in governmental policies. None of these things lead us away from, but rather toward, the conclusion that nothing is acceptable in payment which is not intrinsically valuable or an immediately or prospectively enforceable claim to something valuable.

THE DEFINITION OF MONEY

"Money" is a word capable of many uses, and it will be employed in more than one sense in the discussions that follow. We must pause, therefore, to state and compare its various definitions.

1. When one speaks of the fact that prices are quoted in terms of money, he has reference only to the standard of value.

2. If we speak of wages being paid in money rather than goods, we make the word "money" to include all the medium of exchange, whether issued by public authority, such as the government, or by

private individuals in the form of ordinary credit instruments.

3. Those who say that they "cannot afford to make a purchase because they haven't the money" use the word in the sense of purchasing power and have no direct reference at all to the standard of value or to the medium of exchange.

4. If we say that a certain rich man has plenty of money, we use the word as a figurative expression equivalent to "riches" or "wealth."

5. When money is defined in the scientific sense in which it has been employed in our discussion so far, it means the standard of value and such of the medium of exchange as has very general or universal acceptability. Practically speaking, this latter is almost always only that part of the medium of exchange authorized by the government.

6. As we shall need to make use of the word later, it refers to loans or loanable funds and neither to the standard of value nor the medium of exchange. Thus, when we speak of the money market, we have no reference to money in itself, but rather to loans, the possibility of making loans, the demand and supply of loanable funds, and interest rates.

The law gives the word "money" still other meanings by the use of such expressions as "lawful money." A certain part of the actual money in circulation in the United States is designated in certain statutes as lawful money to be used in the redemption of paper or to be put to certain uses by banks. The statutes also define legal tender, which is that money which must be accepted in the settlement of contracts when no stipulation to the contrary has been made by the persons concerned. The law thus enables people to make contracts without mention of the means of payment or to use the word "money" without entering into specifications as to which of its many meanings they are intending to use. "Currency" is a word used loosely to refer either to all the medium of exchange, to that part issued under provisions of the law as money proper, or to paper money only.

XV

THE MONETARY SYSTEM

The monetary standard. The unit of value. Coinage of the standard. Bimetallism. The subsidiary coins. The silver dollar. The paper money. Critical review of the monetary system. Non-monetary credit instruments. Promises to pay. Orders to pay.

THE preceding discussion of the nature and functions of money and credit has suggested the elements of which a monetary system is likely to be composed. The exact composition of the monetary system of the United States is to be described in this chapter, some of the historical facts which explain the peculiar character of the system are to be presented briefly, and an examination of the elements of the system is to be made with the purpose of arriving at some conclusions as to their utility and conformity with the established requisites of a good medium of exchange. The non-monetary elements of the medium of exchange are also to be described in their simplest forms in this chapter. The critical treatment of the present standard of value is for the most part reserved for the next chapter.

THE MONETARY STANDARD

We have previously mentioned the fact that the precious metals have been found especially suitable for use as standards of value. Among these, gold has been very generally adopted. It is economically desirable, of course, to have only one standard throughout the world, and though no one cause alone brought the principal nations to an acceptance of a common standard, the qualities of the metal selected probably justify its general adoption. Gold not only meets the primary physical requirements of durability, homogeneity, divisibility, and cognizability, but it is, or at least generally has been, of more stable value than any other commodity which would be suitable otherwise for use as a standard. Gold has a very wide market. It is produced in many regions, and its pro-

duction has so far been fairly steady and uninterrupted. As the more profitable sources of supply of the past were exhausted, new ones were discovered, and there are extensive resources upon which we may continue to draw. The quantities actually supplied in the market are not subject to great variations. There can be no very great decrease of supply in the physical sense, because almost all that has been mined, at least in recent times, still exists and is in use. This may all become a part of supply in the economic sense when conditions are favorable. On the other hand, there can be, comparatively speaking, no very great increase in the amount of the physical supply at any one time, because the output of a year, large though it may seem to be when considered separately, is small compared to the world's accumulated supply from past years. The demand for gold as a commodity is almost universal and is consistently elastic. Furthermore, population has grown to keep pace with the discovery of new resources, and the individual demand for gold has so increased with the general improvement in well-being that the market has been able to absorb all the metal offered even though it was to be added to an accumulating stock. Under these conditions, a very satisfactory adjustment of demand to supply has been possible, with the resulting stability of value which is to be desired in the standard. As a consequence, there remain at present only four countries adhering to other standards, and these accept a similar metal, silver. Among these only one, China, is of any considerable importance in an economic sense among the nations of the world.

The advantages of gold are not to be accepted as unqualified and absolute. The conditions under which gold is produced have changed somewhat in recent years. Gold mining has been put upon an economic basis and is no longer simply an adventure. The utilization of the least profitable resources has been checked by rising costs of production. On the other hand, there have been enormous quantities added to the world's stock in the past twenty-five or thirty years, and these have had the effect of increasing the market supply more than would have been the case if the output of former years had been literally consumed as most commodities are. The demand for the metal has not quite the same stability as formerly. For some purposes platinum has come to be used as a substitute. In the monetary system itself, gold is not required in the same way and to the same proportionate extent as formerly.

At the same time, gold is being put to many new uses and is being made attractive in new ways. If all these tendencies were to counterbalance each other, gold would, of course, remain stable in value; in so far as they do not, gold tends to become less satisfactory as a standard.

THE UNIT OF VALUE

Gold is used either in the form of coins or simply as bullion. When shaped into bars, it is suitable for the redemption of other money, and it is actually used in this form in foreign trade where the coins of different nations have no general acceptability. Whether gold is coined or not, there must be some specific amount of it to be defined as a unit of measurement. One cannot compare the valuations of commodities with gold in the abstract; and goods are said to be worth as much as some specific quantity of gold. The unit of value has been fixed by law in the United States at 23.22 grains, and this amount is called a dollar. It is to be noted that the dollar is not necessarily a coin, nor is it any particular part of the medium of exchange. The various elements of the medium of exchange have their own names, such as United States note or silver certificate. The gold coins are known as eagles (ten dollars in gold), half-eagles, quarter-eagles, and double eagles. This last statement reveals the fact, however, that the government does buy and coin gold so that units guaranteed to be of exact weight may always be available. Gold so coined is convenient for use as part of the medium and is a particularly necessary part when the public is inclined to be suspicious of other currency.

While gold as a metal is the almost universal standard of the world, there is no uniformity in the units of measurement of various countries. In Germany, the unit called the mark is roughly equivalent to one-fourth of an American dollar. In many other European countries, the unit is approximately but not exactly one-fifth of a dollar. In England, it is equal by weight to 4.86 dollars. If these various units were all based upon a decimal system, and also could be translated evenly into other money, it would be possible to exchange the gold coins of one country for those of another without difficulty. As it is, it is impossible, generally speaking, to use even the standard currency of one nation in the territory of another, entirely apart from the fact that there might be some

question as to its acceptability among people who were not very familiar with its value. The fact that there are differences in the units of value explains why, in payments to be made in foreign trade between various countries, gold bars are as satisfactory as coined gold itself and why private credit instruments drawn for a definite amount of the currency required in the particular international transaction are used to the practical exclusion of the various fixed elements of the medium of exchange of the countries in question.

COINAGE OF THE STANDARD

Since some of the gold is coined and circulated as a medium of exchange, it is necessary to take steps to make sure that the value of the gold in the form of coin will always be the same as the value of gold in other forms and when put to use in the arts. The coined metal constitutes a different supply, or, at least, becomes somewhat separated from the general supply of the market. It is conceivable that coined gold might become either more or less valuable because of its form, if it were demanded and supplied in a market so separated from other gold markets that there could be no interaction between the one and the others. A commodity which is put to more than one use can be very acceptable as a standard, but no commodity which is offered in separate markets at rates that differ can be entirely satisfactory for use in the measurement of values.

Consequently, the government provides for the free and unlimited coinage of the standard metal. As a result, when there is a tendency for gold to be oversupplied in its various industrial uses, it may be taken to the mint and made into coins without cost to the owner. When the tendency is in the other direction and there is so much gold turned into money that it will buy less in that form than it would bring as bullion in the general market, the gold coins may be melted up and put to other uses. Thus the gold supply may be diverted easily from the place where it tends to be worth little to the place where the tendency is toward greater value. The result is that gold in the form of coin does not differ in value from gold in the form of bullion. Even though the manufacture of coins occasions some cost and though these coins have their especial utility, they are still simply the commodity gold so far as their exchange value is concerned.

European governments that make a charge for coinage ask only enough to cover the exact expense of manufacture itself. The coins issued contain slightly less gold than that which is received at the mint in exchange for them. This charge is properly called brassage but is sometimes called seigniorage. In the strict sense, seigniorage is a somewhat arbitrary charge made for converting bullion into coin and is imposed with the idea that the government stamp on the coin adds so much value that the coins will circulate as the exact equivalent of the same weight in bullion, even though they contain much less real gold. On the theory that coins need only the government stamp to make them acceptable at face value, European kings of two or three centuries ago withdrew coins from circulation and reissued them with a lower content of fine gold, thus enriching the treasury by the amount they had taken out of the coins. There is no longer any mint charge for the coinage of the standard metal comparable to this early seigniorage. In the United States, the government exchanges gold coins for gold bullion of the same alloy, weight for weight. The gold coins have a metal content nine-tenths of which is fine gold and one-tenth copper. A charge may be made for refining when gold is not of the proper metal content and for adding alloy to pure bullion.

BIMETALISM

It is entirely possible to have two or more standards at the same time. In the early history of the United States, there circulated the coins of more than one European nation, and prices could be quoted in any one or all of them. Most important among these were the English coins and the Spanish pieces-of-eight. The latter were silver coins nearly equivalent in value to the later American dollar. The subdivisions of their value were eighths. The latter were known in Spanish as *reals*. In America, they were given various names in different sections, such as shillings, levies, and bits. The bits were worth 12½ cents in the money of the United States, and from this origin comes the expression "two bits" as applied to the quarter of a dollar. In very recent times, Mexican dollars have been used as a standard of value in certain regions in the Far East in transactions with foreigners, when other money was used as a medium of

exchange and standard of value for the purposes of local trade.

It is quite a different matter to maintain one standard to be interpreted by two metals at the same time. The idea of such a double standard is called bimetalism. To use both silver and gold as standards of value while quoting prices in them separately is simply to maintain two independent standards. If there were a bimetallic standard, on the other hand, it would be possible to quote one price in both metals at the same time. The double standard is to be established in this way. Let the dollar be defined as 23.22 grains of gold and also as that quantity of silver which is exactly equivalent in value to the stated amount of gold. If these two quantities of metal are actually valued alike in the market, prices may be quoted in terms of both by the simple use of the word "dollar."

The bimetallic system was adopted by the United States in 1792, and it was only formally abandoned in 1900. As it worked out in our experience, we were not able to maintain the bimetallic standard in fact, and it had only a nominal existence. When the first plan for the establishment of the currency was submitted by Alexander Hamilton, the Secretary of the Treasury, it provided for the free and unlimited coinage of both gold and silver at the ratio of 15 to 1. In other words, a dollar was defined as 24.75 grains of gold and as 371.25 grains of silver. It appeared shortly that gold was worth more than this amount of silver in the open market, and it was therefore more profitable to turn silver in at the mint and make use of gold elsewhere than to present both at the mint. As a result, gold disappeared from circulation, and the money consisted of silver entirely. It may be mentioned incidentally that even the silver dollars disappeared from circulation because of the unusual fact that they could be disposed of to advantage outside of the country. It was profitable to trade the silver dollars for Spanish coins of greater weight, and consequently, there was a gain in exporting them. Shortly, therefore, the coinage of silver was stopped and the country was deprived of the circulation of both its standards.

In order to correct the undervaluation of gold, Congress passed an act in 1834 changing the ratio to 16 to 1 and reducing the size of the gold dollar to effect this change. This ratio also was incorrect. Gold was worth less than this amount in the market and therefore it was brought to the mint where it could be dis-

posed of at a more favorable rate than elsewhere. Silver then passed entirely out of circulation, and the country made use of gold alone. By 1873 the discrepancy between the actual market ratio of gold to silver and the mint ratio was so great that there seemed to be no hope that silver would come back into circulation, and the silver dollar was dropped from the list of coins. Then came a period in which there was no great increase in the production of gold but the discovery of very profitable resources of silver in various parts of the country, so that the market ratio once more changed, and there began an agitation for the free and unlimited coinage of silver. The matter was finally settled by the practical adoption of gold as a standard on a monometallic basis in 1900.

The difficulty in the maintenance of such a standard as the one attempted lies in the fact that the ratio between these metals at the mint cannot be kept in exact harmony with the market ratio if the latter is to fluctuate at all. The standard cannot at the same time be two things that are different. The tendency for the metal which is overvalued at the mint to drive out the one which is undervalued is an exemplification of the principle known as Gresham's Law.

There are some who still believe bimetalism possible, if not in one nation alone, at least if established internationally. Their reasoning is based on the supposed compensatory action of the two metals when thus combined in one standard, which may be described as follows. The tendency of the metal greatest in supply to come to the mint and of the other to go out results in a reduction of the relative oversupply of the one and the undersupply of the other. Thus, the mint acts as an equalizer of supplies, and the metals never draw far apart in value. Therefore, while the standard is an alternating standard, the adjustments are sufficient, and should be rapid enough, to keep both metals in circulation. No doubt there is some such tendency as this. It is simply a question whether the compensatory action is adequate to keep the market and the mint ratios in conformity with each other when there are very great changes in the production of the metals and when these changes are all in one direction. A mint ratio balanced between fairly regular extremes of fluctuation in the market values of the metals would exercise some control over the fluctuations. But when, for instance, the mint ratio is 16 to 1

and the market ratio is as great as 33 to 1, as it was in 1894, it is doubtful that the compensatory action would be very effective. Certainly, bimetalism could not succeed if the several nations attempted to maintain different mint ratios.

Bimetalism has been favored in recent years by some who were not interested in a double standard as such but who hoped to introduce thereby the cheaper of the two metals as the sole standard. This would mean a rise in prices, as we shall see presently, and would favor certain economic interests.

THE SUBSIDIARY COINS

If the standard commodity is one of relatively high value, as is gold, it cannot be used as a medium of exchange in minor transactions. It is not convenient, for instance, to make use of a coin as small as a gold dollar would be, and coins of that size have been issued by the mints only occasionally and for special purposes. It would be practically impossible to coin gold to represent values of five, ten, or twenty-five cents. It is also a rather burdensome procedure to draw credit instruments to make payments of this sort. There is some need, consequently, for metallic money, or at least paper money, to be issued by the government to represent low values and to be used in the smaller transactions. Coins have been generally used for this purpose.

This element of the medium of exchange is intended primarily to meet the requirements of convenience, and the various units differ so much in size and even in color that they may be distinguished without close examination. They are adapted to the making of payments of small amounts and are of such denominations that change can be made without difficulty. The principal subsidiary coins in the United States, the half-dollar, quarter-dollar, dime, nickel, and cent, have the advantage also, as does all the currency, of being on a decimal basis, so that computations are easily and quickly made. They permit of all small payments except those which include a fraction of a cent. In European and Oriental countries, coins of very much smaller denomination are in use.

It is necessary to adjust the amount of this part of the medium of exchange to the needs of the market by some measure of regulation. If there were unlimited coinage, it would be necessary

to establish a mint ratio of purchase in consideration of the market value of the metal. At times, too much would be offered, and, at other times, too many coins would be withdrawn from circulation. There can be no such advantage in unlimited coinage of the subsidiary circulation as there is in the case of the standard of value, and therefore, to prevent an oversupply of minor coins, the mint buys such metal as is needed and makes coins only as they seem to be required for use. In order to provide against an undersupply such as might occur if the coins were more valuable as bullion than as money, the coins are given a metal content much lower in value than the fraction of a dollar which the coins represent. To maintain their value despite this low metal content, the government makes provision for their redemption or for their exchange into other forms of money. They are, practically speaking, credit instruments of a sort, constituting promises of the government itself to pay. Because of their minor importance, however, they are known more frequently as token money.

THE SILVER DOLLAR

Payments amounting to as much as a dollar are to be made by means of paper money or by silver dollars. The reason that these major silver coins are called dollars and known by no other name goes back to the time of bimetalism when they were themselves supposedly standards of value. At the present time, they are issued under the same conditions as the rest of the subsidiary coinage. It is intended that they shall contain a quantity of silver always lower than one dollar in value. Their coinage is limited, and only such quantities of silver dollars are manufactured as are expressly provided for by law. They are exchangeable for, or practically redeemable in, other money when presented to the national treasury, since by law the Secretary of the Treasury is required to maintain all other forms of money at a parity in value with gold.

The presence of the silver dollar in our medium of exchange is to be attributed principally to certain compromises effected at the time when bimetalism was an important issue in American politics. Few silver dollars had been coined previous to 1878, but by the Bland-Allison Act of that year the Secretary of the Treasury was authorized to purchase and coin from two million

to four million dollars' worth of silver bullion a month. The amount was increased by the Sherman Silver Purchase Act, in force from 1890 to 1893, under the terms of which notes of the United States Treasury were issued in payment. The silver was to be coined as rapidly as was found necessary for the redemption of the outstanding treasury, or so-called Sherman, notes. The coinage of dollars continued until 1904, when the supply of silver which had been purchased under the Sherman Act was exhausted. The silver dollars were inconvenient in use and, in the course of time, were replaced in the currency in a large part of the country by silver certificates. Since the treasury notes and the silver certificates would have had to be redeemed in gold if a real necessity had arisen, the great accumulation of silver in the treasury vaults was something of a burden. Here was metal not being used in the currency, not serving any industrial purpose, and capable of being used for the redemption of other money possibly only through its sale and conversion into gold. It was hoped by many that the time would come when the government could be relieved of this silver.

This opportunity arose following the recent World War. A scarcity of silver, due to a reduction in the output of certain silver producing countries and the consequent exportation of unusually large quantities from the United States to meet the demand of the Oriental countries, caused the price to rise in this country finally to the point where the bullion value of the dollar was beyond its face, or redemption, value. Since out of our total of 568,000,000 dollars, 490,000,000 or more were actually in the treasury of the Federal government, it was possible to dispose of the silver hoard to an advantage. In consequence, by the Pittman Act of 1918, the Treasury was authorized to dispose of this silver at a certain minimum price and to withdraw the silver certificates from circulation. Most of the silver was exported. It was provided also by the Pittman Act, however, that the Treasury should repurchase silver from the product of American mines at a certain fixed price. It became necessary, therefore, for the government to buy this bullion when the price began to fall, and to continue to buy even when the market value declined below the point fixed for repurchase under the law. This act, therefore, was in effect a valorization of silver. The government had been permitted to dispose of its stock in the period of rising prices, a

thing which, of course, it might have been forced to do if people had chosen to present certificates and require silver in exchange. But when silver showed a tendency to decline again, the government was put to the necessity of continuous purchases, thus supporting and increasing the price of silver through the succeeding period. It would appear that nothing in the requirements of public finance nor in the need of the business world for a medium of exchange in any way called for or justified the continued inclusion of the silver dollar in the currency.

THE PAPER MONEY

The various credit instruments which constitute a part of the authorized currency are now to be examined and sufficiently described to indicate why they were issued in the first place and what their present position is in the monetary system.

Gold certificates are evidence of the deposit of gold with the government and are promises to pay to the bearer of the paper on demand a specified amount in gold coin. They are issued to those who bring bullion to the mint for deposit or coinage and also in exchange for gold coin. There are certificates of several denominations, of which $10 is the lowest and $10,000 the highest. This element of the currency was created because gold coins of small denominations were often confused with minor coins and because very large payments could not be made conveniently with coins of any sort. By this device it is possible to give gold a place in the circulation without the necessity of the metal itself being passed frequently from hand to hand. As the accompanying form shows, these certificates are full legal tender.

Gold Certificate

This certifies that there has been deposited in the Treasury of the United States of America Ten Dollars in Gold Coin payable to the bearer on demand.
This certificate is legal tender in the amount thereof in payment of all debts and dues public and private. Acts of Mar. 14, 1900, as amended, and Dec. 24, 1919.
(Signatures of the Treasurer of the United States and the Register of the Treasury.)

Silver certificates have been explained in part in the discussion

of the silver dollar. They were issued as early as 1878 for the reason that the silver coins were heavy and so unacceptable to the public that they were returned to the treasury whenever possible. Certificates are now issued in denominations ranging from $1 to $100. The nature of the promise contained in the silver certificate and its limited legal tender character are disclosed in the form below. It will be observed that the certificate does not specifically mention gold, but by an act of Congress the Secretary of the Treasury is under the necessity of keeping these certificates on a parity with gold, which, of course, may at time necessitate their redemption in gold.

Silver Certificate

> This certifies that there has been deposited in the Treasury of the United States of America One Silver Dollar payable to the bearer on demand.
> This certificate is receivable for all public dues and when so received may be reissued.
> (Signatures of the Treasurer of the United States and the Register of the Treasury.)

At the time of the Civil War, the government found itself unable to meet the need for constantly increasing expenditures through taxation alone, and it was not entirely successful in borrowing by the sale of government bonds. Consequently, in 1862, Congress authorized the issuance of promissory notes of the United States which were to be full legal tender. These United States notes, or "greenbacks," still form a part of the medium of exchange. At the present time, there are outstanding notes to the value of $346,681,016 in denominations ranging from $1 to $1,000. A reserve of at least $150,000,000 in gold is maintained by the Treasury for their redemption. The law provides, however, that the notes shall be reissued after redemption, and, consequently, the quantity of greenbacks is not decreased. The "treasury notes," previously referred to, which were issued in payment for silver bullion purchased under the Sherman Silver Purchase Act, from 1890 to 1893, are to be considered as promises of the Treasury rather than of the United States. Very few of these treasury notes are now in circulation, and the quantity is steadily diminishing.

UNITED STATES NOTE

The United States of America will pay to the bearer on demand Twenty Dollars.
This note is legal tender at its face value for all debts public and private except duties on imports and interest on the public debt.
(Signatures of the Treasurer of the United States and the Register of the Treasury.)

National bank notes are the promissory notes of the national banks organized under authority of an act of Congress and established now in every city and even in some villages. The notes are issued under the authority of the Federal law and are engraved and printed by a bureau of the Federal government in a form similar to that of other money. They are of denominations ranging from \$5 to \$1,000. While bank notes constitute only a promise of the bank which issues them, there are reserves to be kept for their redemption, and these reserves are under the control of the government. The bank deposits with the Treasury as security government bonds equal to the amount of the notes issued and also a redemption fund in "lawful money" (gold coins, silver dollars, and United States notes) equal to 5% of the total issue. The notes are redeemable, consequently, in lawful money at the Treasury.

NATIONAL BANK NOTE

National Currency,
secured by United States Bonds or other securities.
United States of America.
The Central National Bank of Richmond will pay to
the bearer on demand Five Dollars.
Richmond, Virginia.

This note is receivable at par in all parts of the United States in payment of all taxes and excises and all other dues to the United States except duties on imports and also for all salaries and other debts and demands owing by the United States to individuals, corporations, and associations within the United States except interest on the public debt.
(Signatures of the President and Cashier of the bank, the Treasurer of the United States, and the Register of the Treasury.)

The Federal Reserve notes are promissory notes issued by the especially incorporated banks known as the Federal Reserve

banks. These notes are in two forms not often distinguished by people generally. The "Federal Reserve bank notes" are authorized to replace national bank notes and are issued only as the national banks surrender their privilege to the Federal Reserve banks. There are comparatively few of these in circulation. They are in denominations of from $1 to $1,000. The "Federal Reserve notes" are issued under entirely different provisions of the law and are intended to occupy a large place in the medium of exchange. They have added an elastic element to the currency, since the various banks are permitted, with proper provision for redemption, to issue such quantities of the notes as are needed in their particular districts, and they are required to withdraw the notes as the demand for them declines. Denominations of from $5 to $10,000 are authorized. These notes are secured by the assets of the banks in general, by certain assets especially set aside for the purpose, and by a gold reserve equal to 40% of the outstanding notes. They are redeemable in gold or lawful money at any Federal Reserve bank or in gold at the Treasury of the United States.

Federal Reserve Note

The United States of America will pay to the bearer on demand Ten Dollars.
This note is receivable by all national and member banks and Federal Reserve banks and for all taxes, customs, and other public dues. It is redeemable in gold on demand at the Treasury Department of the United States in the City of Washington, District of Columbia, or in gold or lawful money at any Federal Reserve bank.
Authorized by the Federal Reserve Act of Dec. 23, 1913.
(Seal of the Federal Reserve Bank of Chicago, Ill. Signatures of Secretary of the Treasury and the Treasurer of the United States.)

CRITICAL REVIEW OF THE MONETARY SYSTEM

The preceding account of the monetary system has revealed the fact that our standard of value and the elements of the medium of exchange have been adopted or finally accepted as the result of many historic considerations among which only a part were strictly pertinent to the creation of a good monetary system. At this point, we may briefly review the forms of money now in

use, with the requisites of a good standard and medium of exchange in mind, in order to discover which of them are most satisfactory from an economic point of view.

We have already indicated the fact that gold is generally accepted at present as the commodity best adapted for use as a standard of value. As long as it is necessary for the maintenance of confidence in circulation, it will be advisable to manufacture gold coins such as are now in use. Gold certificates are a satisfactory means of giving the metal practical circulation without the risk of the use of the coin itself. In any event, gold is to be kept in some form in the Treasury for the redemption of other money, even in times when public confidence in the government is as high as at present. That the amount of gold kept in reserve need not be very great and by no means equal to all the credit money in circulation is due to the fact that the people have very generally learned the nature and use of credit instruments and realize that ability to fulfill the promises of payment which the instruments contain does not depend entirely upon the keeping of reserves at all times equal to the promises. Credit instruments in general would have little utility if the borrower were expected to maintain intact the very fund he had borrowed.

Subsidiary coins are an obvious need, and no improvement in the present coinage of very far-reaching effects is suggested by anyone. On the other hand, the silver dollar has failed of wide acceptance as a medium and probably cannot be given general circulation unless it is greatly reduced in size. That the silver in the Treasury serves as a satisfactory basis for the redemption of other money would probably be contended by no one. While silver certificates are more convenient than the coined dollars, they only represent coins, and there would exist no reason for their issue if the present silver dollars were to be abandoned or themselves put in circulation. The certificates do not have the good qualities of the best credit instruments, since their amount is fixed by the amount of silver in the treasury, and they have no such elasticity as might justify their use.

The United States notes once served a special purpose in that they provided a paper medium of exchange in a time when no better medium was available. For a long time, the United States notes and the national bank notes were the only paper currency except that which represented coined metal, and they served the

need of the community, though in an imperfect way. It is now recognized that the national bank notes were not entirely satisfactory, and they are to be superseded in the end by Federal Reserve notes if the intention of the Federal Reserve Act is fulfilled. Both the national bank notes and the greenbacks were inelastic, and they now offer no advantages not provided in the Federal Reserve notes.

There was a time when it was considered that national bank notes were more secure (because of the bonds deposited with the government for their protection) than notes which were issued under such provisions of the law as now govern the Federal Reserve notes. The safety of such paper as the Federal Reserve notes is no longer doubted in this country, however, and for many years previous to their issuance here, similar notes were in use in European countries. We shall be in a better position to understand the method by which they are issued and the circumstances controlling their circulation after we have given some attention to banking, but we may say for the present that these notes afford us a currency which is very responsive to the increasing and decreasing requirements of trade. They constitute just such a medium of exchange as develops naturally out of ordinary economic activity, but one more secure and therefore more nearly universally acceptable. Examined, therefore, in the light of our specifications as to the requisites of a good monetary system, it appears that the particularly useful elements of our system are the gold coins and certificates, the minor coins, and the Federal Reserve notes.

NON-MONETARY CREDIT INSTRUMENTS

No complete understanding of the monetary system is possible without a knowledge of the private credit instruments which also serve as a means of indirect payment. In the first place, in so far as these latter serve exactly the same purpose as money, they substitute for it, and the extent of the use that is made of them is a factor determining how much money is needed. But, as the description of them will show, they serve the need for a medium of exchange in ways that money cannot. Money and the credit instruments, therefore, in the second place, supplement each other in the market and have somewhat different functions. In

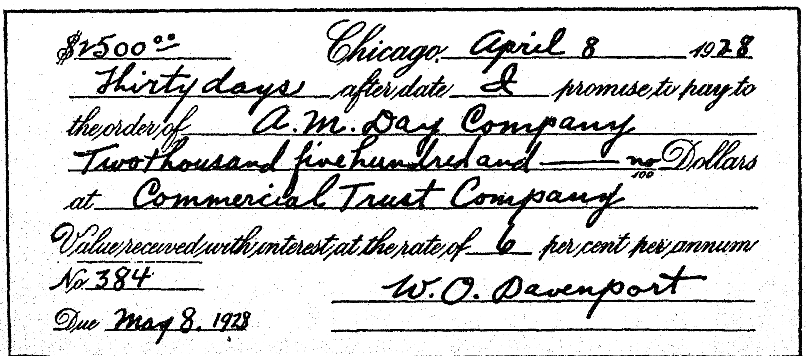
the third place, no matter how the private credit instruments may be used, money is needed as a complement to them, since they always express their values in the monetary standard and they represent obligations to pay in the monetary medium at some time or other. If they do not express exactly in what money they may be paid or redeemed, the legal tender laws will specify.

There are two principal classes of credit instruments, or evidences of debt as we have previously called them. Those of one class take the form of promises to pay; the others are orders to pay. The instruments of the two classes may be made to serve much the same purpose, but they originate in different ways and represent transactions generally of a different sort.

Those obligations which may be transferred freely from hand to hand are most useful as a means of indirect payment, and paper payable on demand or running only for a short time is most acceptable in other than investment transactions.

PROMISES TO PAY

Among promises to pay, bonds are the ones drawn with the greatest formality. They are printed from engraved plates, and the terms of the contract between the debtor and creditor, frequently very detailed, are carefully prescribed on the face of the instrument itself. Bonds, ordinarily, are of long maturity, running from 10 to 50 years or more. They are issued chiefly by corporations and by governments. The form which a corporate bond may take has been shown in connection with the discussion of



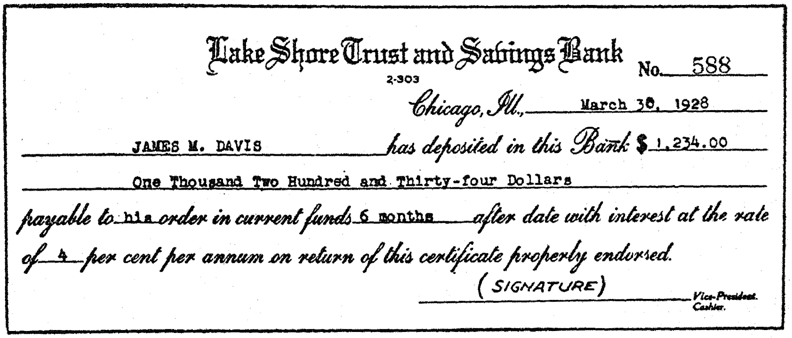
$2500.00 Chicago, April 8 1928
Thirty days after date I promise to pay to
the order of A. M. Day Company
Two thousand five hundred and no/100 Dollars
at Commercial Trust Company
Value received with interest at the rate of 6 per cent per annum
No. 384 W. O. Davenport
Due May 8. 1928

Figure 29: Promissory note.

corporations. Corporate notes are promises to pay which are similar to bonds in form, as are also the treasury notes issued by the government, but they run for shorter periods, as for instance, from one to three years.

Promissory notes are the personal notes of the proprietors of business concerns and of individuals generally. They are ordinarily partly written and partly printed in form.

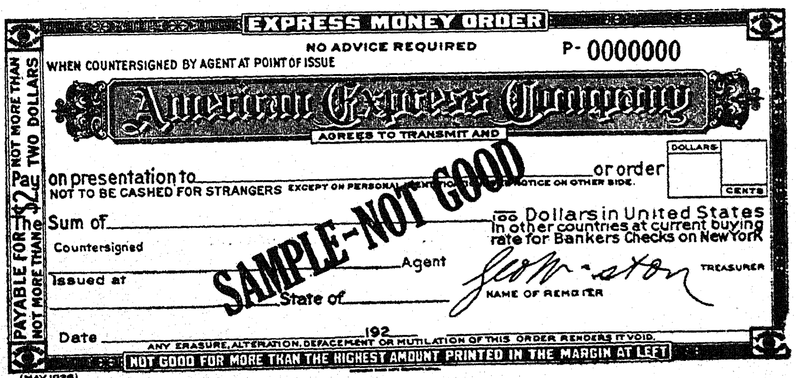
Certificates of deposit are commonly issued by banks to such of their patrons as leave funds to be put at interest. Ordinarily



Lake Shore Trust and Savings Bank No. 588
2-303
Chicago, Ill., March 30, 1928
JAMES M. DAVIS has deposited in this Bank $ 1,234.00
One Thousand Two Hundred and Thirty-four Dollars
payable to his order in current funds 6 months after date with interest at the rate of 4 per cent per annum on return of this certificate properly endorsed.
(SIGNATURE) Vice-President. Cashier.

Figure 30: Certificate of deposit.

non-interest-bearing, or current, deposits are evidenced by a memorandum of deposit, or by record on the books of the bank and the bank book of the depositor. Interest-bearing savings deposits in small sums are recorded in similar fashion. Cashier's checks are much the same in effect as certificates of deposit, and



EXPRESS MONEY ORDER
NO ADVICE REQUIRED P- 0000000
WHEN COUNTERSIGNED BY AGENT AT POINT OF ISSUE
American Express Company
AGREES TO TRANSMIT AND
Pay on presentation to or order
NOT TO BE CASHED FOR STRANGERS
The Sum of 100 Dollars in United States
In other countries at current buying rate for Bankers Checks on New York
Countersigned Agent
Issued at TREASURER
State of NAME OF REMITTER
Date 192
ANY ERASURE, ALTERATION, DEFACEMENT OR MUTILATION OF THIS ORDER RENDERS IT VOID.
NOT GOOD FOR MORE THAN THE HIGHEST AMOUNT PRINTED IN THE MARGIN AT LEFT
PAYABLE FOR NOT MORE THAN $2 NOT MORE THAN TWO DOLLARS
SAMPLE-NOT GOOD
(MAY, 1926)

Figure 31: Money order.

they constitute a promise to pay though they have the form of an order drawn by the bank through its cashier on the bank itself.

The fourth principal form of promise to pay is the money order now issued by the post offices, express companies, and telegraph companies. It is useful in transferring money from place to place where these organizations have offices. While it seems sometimes to have the form of an order, it is not drawn by one person upon another, but by the company upon some one or more of its own agents.

ORDERS TO PAY

In the practice of merchants and others who have sold goods or rendered services for which a deferred payment is to be made, the purchaser is given one of three forms of reminder when the date of payment arrives. One of these is the memorandum of sale.

JONES, BROWN & Co.
Memphis, Tenn.

Sold to............................

....

Date		Items	Charges	Credits	Balance

The second form is a statement of account:

Denver, Colo....................19....

Mr.............................

....

In account with
JAMES M. DAVIS AND Co.

The third form is also a statement of account:

Springfield, Mass.................... 19....

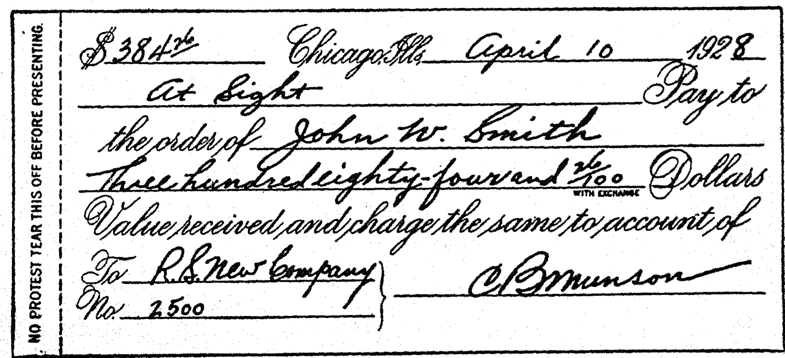
Mr............................

....

TO HENDERSON AND HART, DR.

These statements are all commonly regarded as orders to pay and are called bills. The debtor is given notice that he is expected to make payment, and the order is drawn in favor of the creditor himself. These orders are not in such form, however, that they may easily be transferred, and they are not used in trade as a means of making payments.

In general, orders used in the making of payments are called bills of exchange, bills, or drafts. Some require immediate payment and are called sight drafts. Some are time bills and call for payment in 30, 60, or 90 days. Those issued as orders by one firm on another are called commercial bills of exchange. All these are drawn by a creditor upon his debtor. The former is called "drawer," the latter, "drawee." They generally specify payment to a third person, called the "payee," with whom the drawer has had dealings and to whom he must now make payment.


NO PROTEST TEAR THIS OFF BEFORE PRESENTING.

$384 76/100 Chicago, Ills. April 10 1928

At Sight Pay to

the order of John W. Smith

Three hundred eighty-four and 76/100 Dollars

WITH EXCHANGE

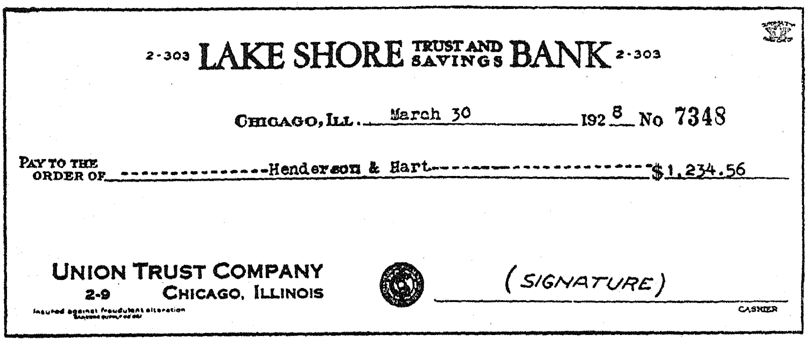
Value received, and charge the same to account of

To R. L. New Company C. B. Munson

No. 2500

Figure 32: Commercial bill of exchange.

When a bill is drawn by one bank on another, it is called a bank draft or, in foreign trade, a banker's bill. The bill drawn by an individual, or business concern, on a bank is called a check.


2-303 LAKE SHORE TRUST AND SAVINGS BANK 2-303

CHICAGO, ILL. March 30 1928 No 7348

PAY TO THE ORDER OF ---------------Henderson & Hart--------------------- $1,234.56

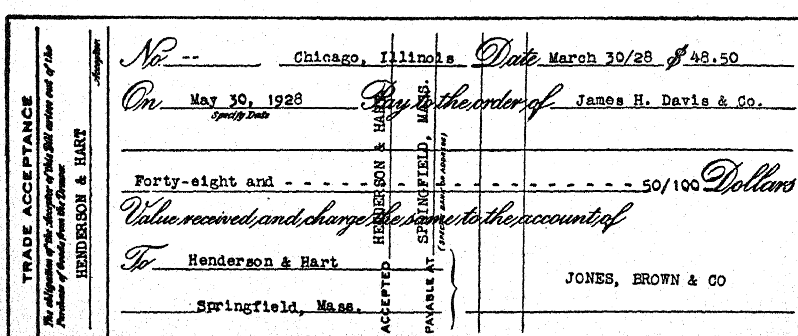
UNION TRUST COMPANY
2-9 CHICAGO, ILLINOIS

(SIGNATURE)

CASHIER

Figure 33: Bank draft.

At the time a bill is drawn it carries no such obligation of payment on the part of the drawee, who is the payer, as does a promise to pay on the part of its maker. Sight bills and checks are generally presented promptly and paid when presented. Time bills, however, to become useful in trade, must be accepted by the drawee before they become binding obligations. The one upon whom they are drawn accepts by signing on the face of the bill. When the bill so accepted involves a sale of goods, it is known after the act of acceptance as a "trade acceptance." The use of the trade acceptance in the making of payments by merchants is extensive enough to justify a special form of bill and special methods of acceptance.


TRADE ACCEPTANCE

The obligation of the Acceptor of this bill arises out of the Purchase of Goods from the Drawer.

HENDERSON & HART

No. -- Chicago, Illinois Date March 30/28 $48.50

On May 30, 1928 (Specify Date) Pay to the order of James H. Davis & Co.

Forty-eight and ------------------ 50/100 Dollars

Value received and charge the same to the account of

To Henderson & Hart
Springfield, Mass.

ACCEPTED HENDERSON & HART

PAYABLE AT SPRINGFIELD, MASS.

JONES, BROWN & CO

Figure 34: Trade acceptance.

There are no fixed and invariable forms prescribed for private credit instruments, and the few illustrations given convey an idea only of their essential character and of the fact of their availability as a means of making indirect payments. The exact nature of the transactions out of which they arise is a matter for later discussion.

XVI

MONEY AND PRICES

The value of the standard. Causes of changes in the level of prices. Consequences of changes in the level of prices. The value of subsidiary coins and paper money. Expansion of the currency. The relation of currency expansion to changing prices. Inflation of the currency. The nature of price indexes. Price indexes illustrated. Reform of the standard of value.

SINCE prices are expressed in terms of money, every condition affecting the value of money has its effect upon prices. If the standard which is used as a basis of comparison in the evaluation of goods is changed, new comparisons must be made between the new standard and all goods offered for sale, and new exchange ratios may be expected to result. A similar revision of prices is necessitated by every variation in the power of the established standard commodity to command other goods in exchange. Prices, in fact, are the expression of a relation between two values, namely, the value of the good offered for sale and the value of the money to be accepted in payment. The actual prices of goods in the market are never to be fully explained, therefore, until there has been taken into account every cause determining the exchange value of money as well as of the goods to which the prices apply.

THE VALUE OF THE STANDARD

Since gold has in general the economic characteristics of other goods, it exchanges for goods at a rate determined by just such factors as govern prices in the markets we have previously described. The resources of the gold supply are similar to those of many other commodities. There is an elastic potential supply to be found in the form of bullion in the hands of the government and of numerous private concerns, and to some extent also in manufactured form from which it may be converted by melting whenever it can be put to more profitable use. The demand reflects the many uses to which gold may be put and is moderately

elastic. Those who are the most active purchasers in the open market for gold are the mints, certain manufacturers requiring the metal as a material in the production of jewelry, and the financial agents who represent the demand for gold in foreign trade. There is no tendency toward either fixed demand or supply except as international conflicts may prevent the free movement of supplies from one country to another, and there is no possibility of either temporary or permanent monopoly. There is, therefore, a free market for gold in which demand and supply adjust themselves promptly to changing market rates, and in which the resulting exchange value, or price, is freely variable.

The fact that a part of the gold supply is used as a medium of exchange and a part is kept in reserve for the redemption of currency does not give to this market a peculiar economic character. The monetary demand is, of course, somewhat independent of other demands, and there may even be said to be more than one market for the metal. But in the markets for many commodities there are such competing demands. Cotton is used in the manufacture both of textiles and of explosives. In all such instances, it is possible to have one uniform price through the interaction of the markets.

But it is occasionally suggested that the amount of gold to be demanded for use as a medium of exchange and for treasury reserves cannot be known until the value of the gold is known, and yet that value is said to be determined in part by the amount demanded. In this particular also, the monetary demand for gold is no different from any other elastic demand. The demand of the buyers in most markets is conditional and is not finally settled until it is adjusted to the market rate, upon which it also has an effect. The demand and the price in the gold market are brought into adjustment in the same manner as in other markets.

In the statement that the amount of gold to be demanded for monetary purposes cannot be ascertained until the value of the gold is known, there is often involved an assumption which is the cause of uncertainty in the minds of some as to the nature of the demand for gold and, for that matter, other money. People sometimes assume that the amount of gold to be used as money is necessarily exactly proportionate to the number of trading transactions to be effected or to the total value of all the goods entering into trade. Thus, it is thought to be necessary for the

mint to procure in the market an amount of gold equal in value to a specific amount of goods. The assumption is incorrect. No exact amount of the standard metal is required for monetary purposes at any given time. Gold is not the only medium of exchange, nor is money the only available means of payment. Very little gold is actually used, and the great payments are made with private paper. The total monetary need for gold is a need for a limited and rather uncertain amount bearing no exact relation to total trade. The amount in the treasury and in circulation as coins is flexible and is actually governed in our monetary system largely by the disposition of the public to bring gold to the mint when conditions of general demand and supply seem to warrant.

There can be no expression of the value of gold except in terms of other goods or in percentages of increase and decrease over former values. The price of gold is simply its power to command other goods in exchange, and a dollar may be worth a bushel of potatoes and various amounts of other commodities. To avoid confusion we speak of the "market value" of gold and the "price" of goods and services. Every market ratio, as previously stated, expresses two things—the price of goods in terms of gold, and the value of gold in terms of goods. When prices are high, the purchasing power of money is low, and when prices are low, the value of gold is high. The purchasing power of money is to be found, therefore, in the prices of all goods and is to be reduced to simplicity of statement only by properly averaging prices or by making quotations in especially significant prices.

So far in this discussion we have come to two conclusions. The prices of goods depend upon their own demand and supply and also upon the demand for, and supply of, gold. The market value of gold depends upon the demand for and the supply of that metal and also upon the conditions of demand and supply of the good or goods which are to be traded for the gold or by comparison with which we are to measure it. Anything which changes the relative economic importance of either goods or gold changes the amount of gold which goods may command in the market, or their price, and conversely, the purchasing power, or value, of gold.

In these conclusions, no reference is made, either in the case of goods or of gold, to the total quantity in existence nor to reserves or hoards in banks and treasuries, but only to the market supply.

CAUSES OF CHANGES IN THE LEVEL OF PRICES

The relation of gold to prices does not affect in any way the comparative importance or exchange power of any two other goods *inter se*. It has its effect upon all price at once, or upon the entire level of prices. When gold is changing in value, it still serves as a satisfactory basis upon which to compare the market positions of two such commodities as, for instance, brick and lumber. It bears the same relation to the prices of both of these at any given time. It is when the prices of goods or services at one time are to be compared with prices at another that changes in the purchasing power of gold become a matter of importance. Even then, as stated above, the changed price of a particular good may be due to causes affecting its own demand or supply as well as to circumstances determining the demand or supply of gold. If changes in individual prices are frequently or usually to be explained by reference to changes in the demand and supply of the goods in question, it is possible that more extensive movements may be explained in the same way. Therefore, we cannot always be sure that a general increase or decrease of prices is to be attributed to gold alone.

It is, of course, very difficult to discover exact causes when the results are of such complexity. Sometimes it is impossible to measure, or even to ascertain, a change in the relative strength of the demand and supply of goods and services in the aggregate. The factors of change are generally very numerous, and the resulting tendencies often run in different directions and counteract each other to uncertain degrees. It is possible for the forces making for change so to offset each other that the effect upon prices is much less than the sum of the causes, if they were known, would lead one to expect. There may even occur great disturbances in the market without an appreciable resulting variation in market prices.

It is a fact, however, that there are increases and decreases in the supply of goods over great areas and that these are sufficient to affect noticeably the level of prices. People engaged in warfare destroy large quantities of tangible goods and divert attention from the creation of ordinary utilities to the acquiring of the peculiar satisfactions to be derived from hostilities. A change in the supply of ordinary commodities may come also from a

decline in the previous rate of increase due to the operation of the law of diminishing returns. On the other hand, an abundance of capital more effectively applied and the development of new methods of production may have results in the lowering of costs and the expansion of production. There may be changes also in the general demand for goods as a result, for instance, of the growth of population or of expanding incomes. In spite of the tendency of each factor of the market to change in adjustment to changes in the other, there is the possibility of changing prices as a consequence solely of such causes as have just been mentioned.

While we must give proper attention to all the causes of changes in the level of prices, we are concerned here principally with the monetary factor. Changes in the relative strength of the demand and supply of gold do have effects upon the level of prices. The movements of the gold market may, of course, counteract other causes. Thus, if there is proportionately greater demand for gold and all other goods at the same time, the two elements gain equally in value, and no change in market ratios results. But if there is a scarcity of goods in general and, at the same time, a tendency to oversupply in the market for the metal, the advance in prices is the more extreme because of the use of gold as a standard. The presence of a variable monetary factor thus not only obscures the operation of other economic causes but also sometimes directly promotes market instability. It is this fact that gives final emphasis to the importance of stability in the standard of value.

CONSEQUENCES OF CHANGES IN THE LEVEL OF PRICES

We are now in a position to understand more fully than before the significance of changing prices. We have seen that these changes are of differing consequence to various persons. Those who have payments to make in the future gain when the level of prices rises. Debtors pay a sum agreed upon when prices were low but which is less in purchasing power at the time the debt matures. Those who lend money gain when prices decline, since they receive more in purchasing power than they gave. Those who have fixed incomes in the form of salary or wages are in the same position as creditors. Their money incomes, if fixed when prices are high, yield more real income after prices have declined.

Those whose incomes are derived from the purchase and sale of goods are favored by rising prices, since they buy at low prices and sell presently at higher ones. For the people as a whole, however, these changes in prices are an element of risk, and they constitute a considerable economic cost. In so far as they yield any benefits, they are in the interest of a part of the population only. All payments received by one are payments made by someone else. Therefore, those changes which are desirable from the point of view of one class of people are undesirable from the point of view of another, and what one gains by changing prices, another loses.

Changes in prices, consequently, indicate neither an improvement of general well-being nor the contrary. It is to be remembered that prices are only the comparison of one good with another. When the ratio between them changes, one is higher or lower only in relation to the other. There is no difference between the two statements that one rises and that the other falls. To express it mathematically, we may take for example the equation $4x=8y$. Let there be assumed a change in y with the result that $4x=16y$. This constitutes a change in the value of x also; and it is of exactly the same effect to indicate the change as occurring in x rather than in y. Thus $2x=8y$. In both instances, the ratio between x and y has changed from 1:2 to 1:4. Changing prices show a different relation of goods to gold but do not show whether or not the people are gaining in satisfactions. The answer to this question is to be found only after an examination has been made of the circumstances attending the change. Thus, there is an advance in well-being when goods and services exist in quantities greater than before in proportion to the number of people who are to consume them. From the standpoint of the consumer, higher well-being consists in an increase of real income regardless of nominal income. From the standpoint of the producer, prosperity is a matter of the difference between income and costs and generally results from efficiency in production rather than from changing prices.

Some are inclined to think that rising prices in themselves have at least a psychological effect in stimulating production, presumably because those who gain have an incentive to greater effort, and, it may be added, those who lose strive the harder to correct their positions. The idea seems to be that encouragement and discouragement have substantially the same effect upon produc-

tivity. If that is so, rising prices should have no more favorable effect than declining prices. No doubt, the enterprisers, being both sellers and borrowers, are inclined toward expansion of activity by the upward movement of prices, and this seems to justify the opinion that high prices mean prosperity. Nevertheless, the United States experienced its most remarkable economic growth in a period of generally declining prices following the Civil War. It seems doubtful that this suggested stimulus plays the part it is so often assumed to play.

In all events, the success of our productive activity is not to be found in the uncertain comparisons of good with good, but in the relation of satisfactions in the aggregate to costs. Whatever incentive and stimulus there may be and whatever of advantage may accrue through changing prices to one group or another, advancement in general well-being depends upon the increase of the quantity of goods and services without corresponding increases in the cost of production.

THE VALUE OF SUBSIDIARY COINS AND PAPER MONEY

We come now to a consideration of the value of those elements of the medium of exchange which are accepted not because of their intrinsic worth but because they constitute claims to something of value. They are taken in payment for goods only because there goes with them the assurance that they may be redeemed. Coins differ from paper money in this respect, that they have a certain intrinsic value of their own. If the government were to fail in its promise to exchange them for other money, their value would drop only as low as the market price of their actual metal content. If, by some turn in the demand and supply of those metals, the content became more valuable in the market than the gold in which they were redeemable, they would be put to other uses and cease to be money. This is what occurred, as we have noted, in the case of the silver dollar. Under ordinary conditions, however, the value of subsidiary coins and paper money alike is determined by the element in which they are to be redeemed. They are only tokens or promises, and the law of supply does not have the same application to them that it has to ordinary commodities.

Practically speaking, the value of representative money is the

value of the gold into which it may be converted. If this were not so, we would have the unlikely situation in which, on the one hand, buyers would part with paper money for less in return than they could get by redeeming it or, on the other hand, sellers would accept it in payment for more of value than the instrument itself promised them on redemption. While, on account of bad bargaining or through ignorance of the nature of the money in use, this might occur in single instances, it is not to be supposed that any general appreciation or depreciation of these credit instruments could take place as long as they were actually redeemable except as gold itself came to be more or less valuable than before. It is not to be expected that buyers generally would pay out twenty dollars' worth of government notes for two-thirds or three-fourths of the amount of goods that they could buy with twenty actual dollars, nor would sellers of ordinary shrewdness accept these credit instruments as higher in value than the gold itself in which they are redeemable.

This explanation of the value of paper money would require no reiteration except for the fact that there is much confusion of thought on the matter. Some suppose that the value of any or all money is dependent upon its supply, and that prices, therefore, are likewise dependent on the supply of money in general. It is said that an increase or decrease in the quantity of money regardless of its nature, the volume of trade and certain other factors being constant, must be accompanied by a proportionate general increase or decrease in prices. Gold, we are compelled to conclude, therefore, is not the standard of value at all, but anything and everything that happens to go under the name of money is the basis of price measurements. This all means, to state it conversely, that the more government and bank notes there are issued, the less they will buy regardless of the fact that they may be redeemable in gold which, as a commodity, may be becoming more scarce and valuable.

We may set forth the reasoning upon which this interpretation of the value of money is based in this way. "Money has only one use, which is the making of exchanges with goods. Whatever the amount of money is, it will all be used in trade. The money which is used to buy the goods is equal in value with the goods. Therefore, if much money is used, it will be low in purchasing power and prices will be high." As a simple statement of an ac-

complished fact, it is true to say that the money that is traded for the goods is equal in value to the goods. The error is in the implications of the statement that all money is traded for goods and in the implication also that all goods are traded for money. In the first place, the commodity gold itself is not all traded for goods, for it is one of the common articles of use, and there need be no particular amount of it actually used in trade. Its demand, for all the various purposes to which it may be put, and its supply, from all the various sources from which it may be procured, determine its value. It is not possible to determine the purchasing power of gold by simply measuring its supply and balancing that supply against the total goods for which it might possibly be traded. Secondly, most goods are traded for private credit instruments. In the third place, credit instruments such as are used as money may be disposed of in more than one way. If they are few in quantity, it is not necessary to attempt to make them serve the entire need for means of payment, since private instruments may be drawn to supplement them; and, if the quantity is excessive, they need not all be traded for goods. They will not be so disposed of if people can convert them by redemption into some other good such as gold at a much more favorable rate. Finally, credit instruments do not simply substitute for gold in the currency, as some suppose. The amount of gold in monetary uses is rather arbitrarily determined. An increase in the quantity of credit instruments in response to the needs of trade does not mean a withdrawal of gold from monetary uses and an increase in its supply in the general market for gold in such a way as to lower its value and thus increase prices. It may mean a change in the number of payments made by private credit instruments.

An idea of a similar popular misunderstanding of the value of money may be gained from a quotation from an editorial in the daily press. "The value of any country's currency depends upon its physical wealth. If there are few notes of currency to represent it, the value of each one will be high. If there are many, the value of the notes will be low, regardless of what numbers may be printed on the face of them." The editor conceives of money as documents of title and as certificates of stock in the wealth of the country. His statement would be fairly true of the relation of shares of corporate stock to the capital of the company; but money does not represent and duplicate in value the entire stock of

physical goods. It does not confer a property right to some percentage or fractional part of the total. Paper money, as a credit instrument, promises the equivalent of a certain sum regardless of how much more there may be or how the tide of the total wealth of the country may ebb and flow. It is much the same as though a farmer with assets of $60,000 were to issue promissory notes for $100 each. Since he promises to pay $100 and is relied upon to do so, a single note so issued would be worth just that amount. If he chose to issue fifty of them, neither the first nor any of the others would depreciate to one-fiftieth of its former value, but each would continue to be worth the same as before. As the farmer retires these notes, those outstanding do not appreciate, and they are not accepted by people for more than the amount for which they can be redeemed. The currency, likewise, does not establish a claim to any percentage of the total national wealth but simply to a payment of the equivalent of so many grains of gold. The value of the currency is directly dependent upon the value of that specific amount of gold so long as there is the expectation that the promise of redemption will be fulfilled.

EXPANSION OF THE CURRENCY

We know that the currency must vary in quantity from time to time if it is to serve the needs of trade to the best advantage. How much will be required at any one time depends upon the volume of trade, the rapidity of the circulation of money, the extent to which private credit instruments are used instead of money, and the habits of the people, especially in keeping large or small amounts of cash on hand and in making cash payments in trade. The means of communication, the character of our financial institutions, the customs of trade, and the form of the currency itself determine largely the rapidity of circulation.

The currency may be adjusted, of course, to the normal requirements of business. But conditions change both regularly and irregularly. There are certain regular variations in the need for money within the course of a year. The time of the harvesting of the crops in the states of the great plains is a time of especial need for currency. The spring, also, is a more active season in farming districts, and a greater volume of transactions makes necessary a greater supply of the circulating medium. If the cur-

rency has the quality of elasticity, it expands to meet these needs and contracts when the stress is over. Expansion of the currency may take place, however, under the pressure of very different causes. This is especially likely to happen in time of war when governments resort to the borrowing of money, rather than to taxation, as a means of making the increased outlays necessary at such a time. They may issue their own notes in large quantities, as the government of the United States did at the time of the Civil War, or they may sell bonds which, though not a part of the currency, are bought by banks with their own circulating notes and by the public which makes use of bank notes as a means of payment. The banks may be authorized to increase the amount of notes in circulation for this purpose and to enable the people to make the larger payments necessitated by higher prices. There was such an expansion of the currency by the Federal Reserve banks during the recent war.

Such an expansion almost invariably occurs during a period of rapidly rising prices; and, at this point, we are confronted again with the notion that the supply of paper money determines its purchasing power and that the quantity of notes in circulation is responsible for, rather than a response to, the high prices. If prices are high, it of course takes more or larger denominations of the medium of exchange to make payments, and it seems that the increase in the quantity of money is ordinarily to be explained by this need. If the expansion of the currency is the cause of the changing market prices, it must be found to be the initiating factor or the stimulus setting the movement under way and not a development simply concurrent with high prices or itself a result of the same cause.

If the circulation of valid promises to pay is an independent cause sufficient to change prices, it is a device that may be used to counteract changes, and we need have no extreme fluctuations in the level of prices such as recently have caused so much economic disorder. The fundamental reason why this cannot be lies in the fact, to which no doubt we have already given sufficient attention, that the purchasing power of this money is not directly proportionate to the amount in existence. But we may take occasion now to trace more fully the operation of these notes as a possible cause of changes in price and attempt to discover their relation to the high prices of recent years.

THE RELATION OF CURRENCY EXPANSION TO CHANGING PRICES

Credit instruments are not issued without cause, and money is not passed out to the public except in exchange for goods or other means of procuring goods. The promissory note of an individual is created following the development of a desire for something and as a means of paying for something which he is demanding. The government issues notes in payment for goods or services and increases the amount of its issues only when it has more payments to make. It has no way of circulating notes except by making payments, unless, of course, it is to lend them. The banks make use of their own paper in paying their obligations to depositors upon demand and in making loans to their customers. They issue notes when someone who has a need for funds comes to the bank to borrow. In all these cases, the creation of the credit instrument is in response to a need for a means of making payment, and that need arises basically out of a demand for goods. An increase in the instruments of payment reflects and expresses an increased demand for goods which itself is a cause tending toward higher prices.

The first economic consequence of a declaration of war is an increase in the government's demand for supplies. This demand is transmitted by the interaction of markets to the suppliers of every good which is of even remote service in the prosecution of the war. This is a continuing and growing demand. Enormous quantities of goods are destroyed outright. Commodities of ordinary use are rapidly consumed by armies not so situated as to economize as consumers generally may. There may be mistakes and waste. On the other hand, suppliers are unprepared for the required expansion of production. Industry is seriously disrupted in making readjustments, and even the efforts toward greater efficiency, induced by the intense need and promoted by patriotic spirit, do not entirely offset the losses caused by inexperience in management and labor. The consequence is that supply does not keep pace with demand. At the same time, non-essential industries are sacrificed to the more important task of the day, with the result that supplies are reduced and may even fall short of a slightly declining demand. There is some extravagance also in the buying of non-essentials by those newly enriched through the war. These things are all causes of high prices and are sufficient

with similar causes to explain the changes that actually occur under such conditions.

An increase in the medium of exchange takes place in response to the need for the means of making more and larger payments. This need is felt by the government and by the people as well. Business men who are expanding production go to the banks to borrow working capital. The public is called upon to buy bonds and to make direct contribution to public and private activities in aid of the war. They pay at higher prices than before for the goods they buy for personal consumption. The new currency which appears at such a time is an expression of the greater demand for goods and a result of the necessity of making payments on a larger scale than previously. The increase of currency may even take place before the changes in price, for the former is naturally a very early expression of the sudden increase of demand. Notes come into existence before the other effect of their cause has developed throughout the entire market. Being one of two results from the changed market conditions, they may appear concurrently with the other result or either before or after it.

We are hardly warranted in attributing high prices to the increase of the currency even as result of the psychological effect of such increase, as some are disposed to do. The presence of much money is assumed by some to lead to free spending. If, and in so far as, the new circulation comes to the hand of the purchaser as an increase of income, it will enable him to demand more goods. But even so, the resulting high prices are to be explained by the greater demand, and it, in turn, by the causes of the advance in income, rather than by the stimulating effect of the presence of the currency. The currency is a permissive and limiting factor in times of rising prices, since trade is dependent upon some means of making payment. Market developments, therefore, may be hampered by an inadequacy of the instruments of exchange. But in this respect they are secondary rather than primary causes in their bearing upon prices.

INFLATION OF THE CURRENCY

The expansion of credit instruments beyond the possibility of redemption is inflation. Inflated credit instruments are comparable to watered stock in one respect. There is an unsubstan-

tial element in each, though they represent property rights of an entirely different sort. There may be a very great and even unnecessary expansion of the currency without the slightest impairment of the value of the elements of which it is composed. It is only when the point of inflation is reached that serious economic consequences are likely to ensue. Whether or not the currency is inflated cannot always be determined by the form in which it is issued. It may contain the customary promise of redemption and yet be actually non-redeemable. On the other hand, fiat money, which to begin with carries no promise of redemption, may be taken up by the government and its redemption insured. Inflation is not a matter, therefore, either of the amount of currency issued or of the nature of the promises made on the paper itself.

There is much misuse of the word "inflation," and it is often confused with expansion. It has repeatedly happened in the history of the world that when currency was unduly expanded, it became impossible to redeem it, so that expansion and inflation amounted to the same thing, practically, in the end. Overexpansion does lead easily to the point of inflation. Furthermore, inflation leads to greater and greater increases in the quantity of the paper in circulation. Non-redeemable currency is easily increased in amount. There is no reason why a government may not borrow or buy to any extent if it can do so simply by emitting promises which it need not fulfill.

Possibly much of the currency of Europe which in the last few years has offered a perfect illustration of inflation was created in the first place with the expectation that it would be redeemed and was then expanded to the point of non-redeemability. By the use of such means, the governments found it possible to increase their incomes after all their resources of taxation had been exhausted. In some cases, they found it the only means and carried expansion too far for the stability of currency itself, finally abandoning redemption in specie. Since the value of the currency declines under such conditions, it naturally required greater and greater quantities of it to purchase the needed supplies. This made greater quantities necessary for the purposes of revenue, made more and more hopeless an ultimate redemption, and caused further and further depreciation. In this way expansion and inflation proceed hand in hand; but there are two facts to be distinguished, and we need two words to designate them. The words

represent either two separate situations or two phases of the same situation.

We have already suggested that inflated currency depreciates in value. That it has value may be due to the fact that the people are not aware of the true state of affairs or that they are so in need of a circulating medium that they continue to use the customary medium at its former value or at a value based upon the hope that the currency will ultimately be redeemed. There is usually the chance of redemption. There are those, consequently, who speculate in the paper and in so doing create an additional demand for it which gives it an added value. They are carrying into the present the value which the medium is expected to have in the future. These forces are not sufficient to maintain an inflated currency indefinitely, and if the time comes that there is no considerable possibility of redemption, the paper passes out of circulation entirely.

Non-redeemable paper is not related in value to any exact amount of the standard. On the other hand, the quantity of it in circulation affects its value only as that quantity may be evidence of the hopelessness of ultimate complete redemption. No power could keep in circulation the currency of the Confederate States of America, no matter how small the quantity, when the hope of redemption had entirely passed. The purchasing power of such money is determined by a calculation of the possibilities of redemption, involving the amount which will be paid in the end and the time that will elapse before it will be paid. Prices quoted in inflated paper money, therefore, differ widely from those quoted in gold or any other substantial standard.

THE NATURE OF PRICE INDEXES

While the purchasing power of money is indicated in a limited way by every effective price, no satisfactory measurement of this power as it applies to goods in general is possible except by the combining of the prices of numerous commodities. When such a combination of prices is made, it may be used in the comparison of the levels of prices from year to year. Unless this is done, we are left to surmises only as to the changing conditions of the market and the variations which are taking place between cash incomes and real incomes. The computation of prices is called an

index of prices, and the figure at which prices are said to stand at one time or another is called an index number.

An index number may be computed by taking either the total or a simple average of all prices. The results of a similar computation in later years may then be compared with the first, and it may be determined in this way whether or not prices have advanced and if so by what percentage. It may be better to reduce the total or the averages to percentages. For instance, some one year or an average of a certain few years is taken as the base year or period. The combined prices of that period are then said to be 100 per cent. In succeeding years, when totals are taken, they are reduced to percentages which show increases or decreases over the base year. Sometimes, the separate items are first reduced to percentages and the totals then averaged, while in other cases, totals are taken for the group and percentages constructed afterward.

A simple total or average of prices results in a very imperfect index, since prices are not quoted in the market generally for exactly equivalent units of commodities. No very useful totals can be obtained when the price of one article is quoted in pounds and another in tons. On the other hand, to reduce all prices to rates per pound is not entirely satisfactory, since a pound of coal is in no sense the equivalent of a pound of coffee. Another difficulty arises in the choice of the articles which are to be combined in the final total. If every commodity is included, there will be many trivial items, and the index will convey an incorrect idea of the effectiveness of cash incomes as they are actually used. Some commodities predominate in sales and purchases, and the list must be so chosen as to include only those which are of importance. This means that the list of articles will not necessarily be the largest possible, though generally in making averages the larger the number of items the more satisfactory the result. The purpose for which the index is to be constructed may govern the listing of prices so that in one case retail prices alone will be used and in another wholesale. It is evident that it is very difficult to construct an index number which will show the purchasing power of money in full, though for all practical purposes, an imperfect number may show the trend of changes from year to year without considerable error.

The relative importance of goods, to consider one difficulty, may

be taken into account by multiplying the individual items by numbers indicating the extent of the use of the articles in question. This is called weighting. In a computation intended to show the effect of high prices on the incomes of laboring people, for instance, it would be desirable to include only such items as are found in their budgets and to weight each of these items in accordance with its importance in the consumer's scale of purchases.

PRICE INDEXES ILLUSTRATED

The indexes actually in use are constructed on comparatively simple lines. The index of the London *Economist* is a simple total of the wholesale prices of 47 commodities which are grouped and reduced to 22 items. The base is found in the prices of the years 1845-1850. All other prices are indicated as percentages of the initial total. In the United States, the indexes of most frequent use are those of the Department of Labor, the *Annalist*, R. G. Dun & Company, and Bradstreet's Commercial Agency. The base of the index of the Department of Labor was originally the year 1860. Recently, the year 1913 has been used instead. Prices are taken from daily quotations or from quotations on a particular day of each week. These prices are averaged for the month, and the resulting averages are each multiplied by the quantity of the commodity to which they apply estimated to have been sold in the market in a certain year. This procedure, supposedly, gives each article its proper weight and indicates the purchasing power of money in the market as a whole. The different results are added together to find the total price for the commodities in the month or year in question. The sum is then reduced to percentages of the total for the year 1913, the base year. Four hundred and four commodities, including both raw materials and manufactured goods, are included in the list. This method of constructing an index is illustrated by Table 3.[1]

The index of the Department of Labor of Canada involves the prices of 271 commodities, and the list includes much the same items as that of the Department of Labor of the United States. There is no weighting of the different articles, however, since it is

[1] This and the two following illustrative tables are taken from the *Monthly Labor Review* of the Bureau of Statistics, United States Department of Labor, Vol. 11, No. 3.

TABLE 3

METHOD OF COMPUTING INDEX NUMBERS

USED BY THE DEPARTMENT OF LABOR OF THE UNITED STATES

Article	Estimated Quantity (000 Omitted) Marketed in 1909 Times Average Price in	
	1913	January 1920
Beans	$ 33,784	$ 66,421
Codfish	4,595	6,508
Potatoes	244,179	1,041,937
Total	$282,558	$1,114,866
Reduced to index numbers	100	395

supposed that in a list so great the difference in the results obtained would not be considerable. As a matter of fact, some difference does result, as can be discovered by comparing the index numbers of the two departments from time to time, though it is to be remembered in this connection that the lists upon which the indexes are based are not identical.

The method used by the *Annalist*, a financial journal published in New York City, also differs from that of the Department of Labor of the United States in the point that the averages are un-

TABLE 4

METHOD OF COMPUTING THE "ANNALIST'S" INDEX NUMBERS

Article	Price per 100 Pounds	
	1913	January 1920
Beans	$3.9896	$7.7500
Codfish	6.7080	9.5000
Potatoes	1.0238	3.9250
Reduced to percentages of the 1913 price	100	194
	100	142
	100	383
Total	300	719
Divided by 3	100	240

weighted. The prices per 100 pounds of each listed commodity are taken, and these are then reduced separately to percentages of the base period, which is the period 1890-1899. A simple average is then made of the indexes of the separate commodities, giving the final index number. This method is illustrated by Table 4. The *Annalist's* final index is derived from the prices of 25 food products in the New York and Chicago markets. A weekly index number is computed.

Bradstreet's index is derived from the wholesale prices of 96 commodities. Only the prices on the first of the month are taken into account. The index number is found by adding together the prices of one pound of each of the commodities at the date named. The result is stated, of course, in dollars and cents. The commodities are arranged in 13 groups and the sum of the different indexes of these groups is the index for the whole. Yearly indexes are arrived at by averaging the twelve monthly totals. Since the index is not reduced to a percentage, no base year is needed, and the prices are to be compared directly. The following table illustrates this method.

TABLE 5
METHOD OF COMPUTING BRADSTREET'S INDEX NUMBERS

Article	Cost of 1 Pound in—	
	1913	January 1920
Beans	$0.0399	$0.0775
Codfish	.0671	.0950
Potatoes	.0102	.0393
Index number	.1172	.2118

In Dun's index, some 300 commodities are taken into account, and their wholesale prices on the first of the month are made the basis of computation. The items are weighted by a calculation of the per capita consumption of each, in which calculation the amount in dollars and cents which is required to purchase a year's supply of the produce for the average individual at the time named is the consideration. In this case also, total prices are taken without reduction to percentages, so that no base year is necessary for comparison.

REFORM OF THE STANDARD OF VALUE

The use of a commodity of common consumption as a standard of value has its disadvantages as well as its advantages. We have dwelt at length on the importance and even the necessity of the use of such a commodity and also on the fact that changes in prices may be due in part to a change in the demand and supply of the standard. We have had no occasion to stress, as it would be desirable to do, the ill effects of changing prices not resulting from improvements in the methods and conditions of production, though some mention has been made of those unfavorable results. The increase in the amount of gold mined in the past twenty or thirty years has greatly cheapened the metal and has had noticeable consequences in the level of prices. If a more satisfactory commodity could be found, it would be advisable to adopt it as a standard. Apparently, no one suggests that there is such a commodity.

The difficulties encountered at the time of the recent World War through the concentration of gold in certain countries where purchases of goods by foreign nations were heaviest revealed another very great weakness in the use of gold or any other commodity as a standard. Countries needing supplies and being under the necessity of making payment in gold found their reserves drained away so rapidly and completely that they could maintain no funds for the redemption of their currencies. Prices were affected in all the countries either importing or exporting gold in great quantities, either by reason of the changed supply of the standard or the depreciation of the paper currency or both. This had all the consequences that depreciation of the currency ordinarily has, and it added to the tendency for prices to rise in countries where production was being conducted under very great difficulties to begin with. No solution of the problems involved in this situation seems yet to have been offered.

At this point, however, a certain proposed reform of the standard is to be mentioned. It was devised to enable us to avoid the changes in prices which occur in normal times. It is probably admitted that it also would fail in a time of extreme difficulty such as that to which we have referred. Professor Irving Fisher of Yale University has proposed that prices be kept stable by shifting the changes which occur in the ratio of gold to goods, entirely

to the gold side of the ratio. As it is now, a dollar is always the equivalent of the same amount of gold but of various amounts of other goods. If the index numbers could be taken as an indication of what a dollar is worth in the goods for which it is spent in some base year, certificates could be issued by the government and be made always to purchase the same amount of goods by varying the amount of gold bullion with which they would be redeemed as the index number showed a tendency toward change. So, as the index number showed gold becoming cheaper or prices higher, more gold would be given to those desiring to redeem the certificates. As a result, a dollar certificate would be worth differing amounts of gold but always the same amount of goods.

The consequences to those dealing in goods would be favorable, since they could make contracts of deferred payment with certainty and would be assured in advance of the exact purchasing power of the income to be received from their productive efforts. The burden of increasing and decreasing prices would fall only on the one commodity and on those who dealt in it primarily. It is to be noted that this is not an attempt at all to create fiat money. It is rather a proposal to redeem the currency with the same amount of purchasing power in gold rather than a fixed physical quantity and to make the value of commodities in general in some particular year the basis of measurement or standard of value in succeeding years.

This plan of stabilizing prices is futile, of course, unless prices do bear the direct relation to gold, rather than to the entire quantity of currency, which has been pointed out in this chapter.

ECONOMICS

PRINCIPLES AND INTERPRETATION

PART V

FINANCE

XVII

THE NATURE OF FINANCE AND THE FINANCIAL ORGANIZATION

The nature of finance. Private, or business, financial administration. The administration of public finance. Elements of the financial organization of the market. The commercial bank. The Federal Reserve system. The savings bank. The trust company. Agents of the borrower. Commercial paper companies. Agents of the investment borrower. The agricultural credit organization. Personal loan banks. The financial system.

Money and the privately created elements of the medium of exchange, which have engaged our attention for a time, are only instruments of the prevailing indirect payments of the market. We have become familiar with the form and nature of these instruments, but we have yet to describe and analyze the process of payment itself. This process, taken as a whole, is one of some complexity, as may have been suggested by the brief classification of methods of payments previously given. The variety of form and content to be found in credit instruments, as disclosed even in the few illustrations which have been presented, emphasized this complexity. It is essential, therefore, to an understanding of trade that we continue the study of the making of payments to the point of discovering in full the methods of requiring and effecting settlement available respectively to those who sell and those who buy; that we trace the process by which the instruments of payments are converted into purchasing power; and that we acquire a knowledge of the constitution, special functions, and administrative control of the financial organization of the market for goods and services. The process we are to study has administrative aspects from the standpoint of the internal management of business enterprises also, and we shall take occasion briefly to present the individual manager's problems of finance.

THE NATURE OF FINANCE

Finance has to do with the making of payments. The word "finance" has this single fundamental meaning in whatever

connection it may be used. Popularly, it is a word assumed to refer in some way to money. Financial affairs are generally supposed to involve the creation or handling of money. In so far as payments require the use of the authorized medium of exchange, the popular view of the matter is correct. But finance is a term of much broader application than this, and its essential meaning is to be found in its relation to the process of making payments rather than to the instruments used in such transactions.

Two phases of the financial process require somewhat separate consideration for purposes of scientific treatment. It is convenient to distinguish between the making of payments and the negotiation of loans, though the two are related and not to be separated entirely in practice. In speaking of the former, we have reference particularly to the physical process of paying. The methods established and the machinery employed in transferring the means of payment from hand to hand, in enabling payments to be made in distant places, and in reducing the time required for the settlement of obligations are noteworthy features of the financial system. To give this matter concreteness before passing on to other points, we may say that we shall study in this connection the clearance of checks by the banks and the methods of settling other than local obligations without the sending of money by mail or express.

The privilege of making indirect payments is to be taken for granted in our economic system. In fact, payments are now so nearly all indirect that we need no longer use the qualifying adjective. But there is no such general privilege of making deferred payments. The second phase of the financial process requiring special attention, therefore, is the negotiation of loans by which one acquires the right to postpone payment for goods received, in one instance, or, in another, accomplishes the same result by procuring the means of immediate payment upon a promise of later settlement with the lender. These transactions depend, of course, upon the possession and use of credit.

PRIVATE, OR BUSINESS, FINANCIAL ADMINISTRATION

Private financial administration is directed toward the control of the income and outgo, or the receipts and disbursements, of a single enterprise. The manager has a part in the financial trans-

actions of the general market, of course, as well as in the management of his own private affairs. All his incoming and outgoing payments concern another than himself, and they are made ordinarily through the channels provided for the use of everyone. His acts of administration are, in fact, causes initiating and helping to determine the extent of the financial operations of the entire market. For the present, however, we shall consider in this connection only matters of internal control.

The current income of a business enterprise results chiefly from production and sales. Assumed that the customers have been chosen with proper regard to their financial dependability, payments from them may be expected with no other administrative attention to the matter than may be given by the treasurer. The financial problem of the manager, therefore, might be thought to be largely one of planning and making expenditures. However, the current income is hardly ever sufficient to provide all the capital required throughout the life of the concern, and the proprietor himself, generally, has less money for investment than his undertaking demands both at the outset and at a time of extensive expansion. Consequently, it is necessary to procure funds from outside interests. Even in the very small enterprise, it is often the policy to arrange frequently for loans for the purchase of raw materials or for additions to the stock in trade. One of the manager's major financial problems in most concerns, therefore, is the procuring of income by the sale of stocks or bonds, by the negotiation of short-time loans, or by both of these methods.

In a limited way, the manager of an ordinary enterprise may engage in lending as well as borrowing. In so far as he extends the privilege of deferred payment to customers or, as we commonly say, permits them to buy on credit, he places them in debt to the concern, and he may be said to have granted them loans. The extending of credit is a matter of financial policy. The manager's decision turns on the question of the probability of a greater total income through deferred payments than through immediate, or cash, settlement by customers. These loans are essentially a means of increasing income, and though the detail of their administration may be left to salesmen or other members of the personnel, their control is fundamentally with the financial management.

There are routine expenditures to be made in the conduct of

every business which do not require the constant attention of the chief financial officers of the concern and seemingly do not give rise to important financial problems. Some disbursements may be made at times and in amounts to be determined by subordinate officers. Thus, the making of minor purchases may be assigned as a function to a purchasing agent with discretion as to the prices to be paid. His decisions affect outgo just as the prices set upon the goods to be sold affect income, and yet these both may be regarded as routine matters and not of great financial importance. However, the making of the budget or, in the absence of such a device of control, the separate determination of the appropriations out of income to be made for the various principal classes of expenditure is a major financial function of the management. The costs of operation and the various fixed charges are to be met by numerous payments for which some provision must be made. Maintenance is to be provided for by immediate expenditures or by the setting aside of a special fund by means of which replacements may be taken care of in the future. There may be reserve funds to be created to meet such extraordinary payments as the risks of the business indicate to be necessary. It may be desirable to appropriate funds, likewise, to insure the continuance of ordinary payments in the face of difficulties. Thus, certain sums may be temporarily invested to meet fixed charges in times of business depression or even to pay dividends at such a time. The manager has occasion to consider, also, whether or not some of the earnings of the concern are to be put to use in the business itself as capital rather than to be paid out as profits. Occasionally, there is the necessity for the repayment of loans or for their "refunding" by the substitution of new notes or bonds for the original obligations. Finally, when earnings are sufficient dividends are to be paid.

We have stated the problems of internal financial administration with productive enterprises principally in mind. The consumer's personal administration gives rise to questions that are in many ways very much the same as those that concern the business manager, and the principles applied to their solution are similar to those of business finance in general. There is this fundamental difference, however, that the financial administration of consumption begins after the amount of the income is determined, and consequently, expenditures are its objective and

income the means, rather than the reverse. In other words, the consumer receives income in order to make expenditures, while the producer makes expenditures in order to gain income.

THE ADMINISTRATION OF PUBLIC FINANCE

The administration of public finance proceeds in a manner almost the opposite of that which we have assumed to prevail in the manager's control of payments. While the business manager is engaged primarily in acquiring income and directs his disbursements to that end, in public finance a decision is reached first as to desirability of expenditures, and the sources of income are then drawn upon for the required funds. The state appropriates to public purposes a part of the general income of the people and may draw upon this income somewhat at will. Public administration of finance is like that of the consumer in that both are largely non-productive in method in the sense that expenditures are not directed toward the increase of income; but in one point they also are decidedly unlike. The state may adjust its income to its need for expenditures; the individual may not. The latter is subject to rather exact quantitative limitations, while the state is much more free to construct its budget in conformity with its consumptive requirements.

There are, nevertheless, positive limitations upon the expenditures of the state. In the first place, the state is dependent upon the incomes and resources of individuals, and it may not expect to absorb too great a portion of those incomes without resistance from the taxpayers. In the second place, if it were to draw upon capital as a source of funds for its non-productive outlays, that is to say, if it were to require payments from the people in such a way or to such an extent as to compel them to abandon the maintenance and replacement of productive equipment and to cease saving and investing, the capital of the country would be impaired and the future income of the state would be so much the less. It is desirable, also, in the interest both of the people and of the state, that taxation be held to some regularity so that personal and business budgets may not be too often disturbed by unusual or unexpected public levies. For this latter reason, the state often borrows to meet exceptionally heavy expenditures, and, it may be added, it sometimes borrows also to disguise the fact, as a

measure of political expediency, that heavy burdens have been assumed which the taxpayer ultimately must bear.

When the state borrows, it enters the same field as the private manager, and its transactions are of the same form and nature as his. The same principles that apply in private affairs are applicable also to the economical administration of governmental expenditures, if not to the selection of the budgetary items themselves. In spite of the differences in point of view and purpose, in these particulars at least, public and private finance should be governed by the same considerations and make use of the same methods. The distinguishing features of public financial administration, so far as method is concerned, is the process by which it acquires its ordinary revenues.

Taxes are compulsory contributions required by the state to be made in support of the general activities of the government. They are levied in accordance with some rule and are commonly apportioned among the people with some consideration, at least, of the ability of the several individuals to pay. The index of ability in some instances is income; in most others, it is the possession of property. There are many kinds of taxes, however, and they are justified upon many different bases. There are flat rates, or per capita taxes, inheritance taxes collected from property in transmission from the decedent to his successors, indirect taxes, or duties, such as the tariffs paid for the privilege of importing goods, consumption taxes levied upon the sale of luxuries (the "internal revenue" taxes of the United States), and many others, some of which have had limited use and most of which can not be briefly described. A limited amount of the revenue of the state is derived also from the fees which are charged those who make use of, and supposedly receive a direct and personal benefit from, certain services offered for the convenience of the public. These are voluntary as distinguished from compulsory contributions. Special assessments are levied to pay for such public improvements as are obviously of direct and special benefit to a few as well as of indirect benefit to the people in general. Thus, special payments are required often in connection with the paving of streets and other such public works as affect the value of nearby real estate. Finally, the government derives an income from productive undertakings of its own comparable to those of private industry. The prices and rates which are charged by municipally

owned water supply companies and street railways are revenues of this sort.

Taxes sometimes are adopted as measures of economic reform and for the purpose of regulating production, consumption, or trade. Governmental financial policies with regard to expenditures also are often intended to give direction to economic activity or confer benefits upon some part of the economic organization. In fact, whether so intended or not, public finance has economic consequences, and those consequences should govern to some extent the financial policy of the state. This is a subject which might easily lead us beyond the field of finance itself. In the treatment of the subject immediately in hand, we are to take further note of public revenues and expenditures only as they enter into the transactions of the market in general, as do those of other producing or consuming economic units, and in so far as they are handled through the agency of the financial machinery of the market which we are to describe.

ELEMENTS OF THE FINANCIAL ORGANIZATION OF THE MARKET

All those who buy and sell have a part in some financial transactions—though they alone do not constitute the financial organization. There are other borrowers and lenders, and there are also many special agents that act as intermediaries in the making of payments and the lending of funds. The position of the producers and consumers in general in the financial market will be described briefly at once, and the special agencies and institutions which constitute so large a part of the financial organization will have our attention in the remainder of the chapter.

Those who buy are under the obvious necessity of making either immediate or deferred payments. They very often seek loans and appear thereafter both as payers and borrowers. In connection with a single trade, they may negotiate a loan, make an immediate payment, and later repay the loan. In this way, the operations of finance are multiplied over those of buying and selling itself. Among the borrowers are occasionally to be included consumers and very generally all producers, because the latter, by reason of the nature of modern business organization, are compelled to enter the market for loanable funds to procure the means of buying capital. Being buyers of capital goods, the

producers are payers, as in acquiring the funds to buy, they are borrowers. But producers may appear more frequently as borrowers than as buyers, as, for instance, when in the postponement of their payments for goods, they need to renew their notes at intervals or refund their bonds.

The seller, as payee, is a factor in the financial operations of the market. He is also often the lender, as we have seen, in that he may extend credit to his customers. But there are lenders other than the seller, and borrowers depend chiefly upon those who lend in other capacities than as seller. The consumers and producers who have surplus funds are the makers of loans and the chief investors of the market. The tendency of trade is toward the making of immediate payment to the seller; the buyer, in consequence, draws upon financial institutions, such as banks, for such loans as he may require. The special lenders to whom we have referred sustain these institutions and, of course, are available for direct lending when no intermediary is desired.

We may designate the financial institutions collectively as banks. They have two principal functions: to facilitate the making of payments and to act as intermediaries in loan transactions. They may seem to treat the facilitation of payments as an incidental matter, and it is true that their profits come from the making of loans. Without the service they afford in connection with simple payments, however, they would lose much of their support, and that they recognize the fact is shown in their tendency to multiply services to their patrons. Even these minor services are of great importance to the public and are worth mention here. The banks maintain safety deposit vaults for the storage of valuables. They make collections for customers, not only upon notes and bills of exchange, but also upon bonds and bond coupons and even upon invoices. They offer expert advice upon investments and purchase securities for customers. They disseminate credit and trade information. Such services are given in addition to the handling of checking accounts and making of loans which are their principal activities.

Some of the banks have one further activity, one so important that it may be considered a third principal function. This function is the creation of credit and the lending of the credit of the bank itself to the borrowers. That is to say that these banks not only lend the funds left with them on deposit and borrow from

the public in behalf of their customers, thus acting as intermediaries, but they also create credit in themselves which they may lend directly.

There are certain great borrowers whose activities in finance are so important that they are sometimes mistaken for a part of the financial machinery itself. There is very widespread and continuous trading in the stocks and bonds of corporations. Investors depend very much upon security issues as a means of placing their surplus funds to an advantage. These investors sometimes come to think of the corporations as agencies created to aid them in making investments rather than as producing organizations in great need of loans, as they really are. There are also very important lenders in the market, upon whom many rely constantly for funds, who lend only as an incident of, and as an aid to, their principal activity of producing physical goods or some other than a financial service. Thus, the insurance companies are assumed by some to be strictly financial institutions when their essential purpose is to provide the service of protection. Their lending is adjusted to their own needs and not to those of the traders and investors of the market.

THE COMMERCIAL BANK

At the very center of the financial organization is the commercial bank. It is the one part of that organization which attempts to serve the many needs of the public in general and which performs to some extent all the functions and performs all the services to which reference has just been made. It has a measure of specialization; for its historic origin was in a time when financial machinery was less widely used than at present and when many aids to production that are now required were entirely lacking and seemingly not in demand. In early days the commercial bank was the servant of the merchants. It received their deposits and extended to them the short-term loans which the merchants still particularly desire. But though these banks still limit their lending operations principally to short-term loans, their service is of such a nature that they accommodate farmers, manufacturers, and others in need of working capital or even fixed capital, and there are few individuals or business units that do not make use of their service to depositors.

The depositor leaves his current funds with the commercial bank in a "checking account" for convenience and safety in making payments and as a means of simplifying the indirect payment for goods. Occasionally he may have funds to be left for a definite period of time, and he is in a position, in that case, to draw interest on the deposit, receiving a time certificate as evidence of his loan to the bank. If he maintains a large deposit continually in excess of his withdrawals, he may even receive interest on current funds. The customer of the bank is the one who borrows there.

In its own organization the bank is very generally a corporation having stockholders and a capital fund paid in by them. Its general officers correspond to those of other organizations, and its principal internal organization consists of a president who has control of the lending, one or more vice-presidents in charge of special departments of service, a cashier who supervises the routine work of the bank, and receiving and paying officers called tellers.

Commercial banks may be chartered either by the state or by the national government. There still remain banks in a few states not required by law either to incorporate or to conform to special statutory requirements; but, for the most part, the business of state and national banks is closely regulated by law, and the accounts of these banks are regularly inspected. The first of the national banks were organized in 1863. While they are chartered by the national government, they operate in much the same way as any other commercial bank. Being chartered under Federal authority, however, they are regulated and inspected by the Comptroller of the Currency and have the privilege of issuing notes in a form to circulate as money. Recently, the national banks have been authorized to engage in foreign banking, and they may also establish branches abroad under certain restrictions imposed by the statutes.

THE FEDERAL RESERVE SYSTEM

The Federal Reserve system is a device for bringing together all the commercial banks of the country into one great, though very flexible, national association. The purpose of such a union of the banks is to make possible a more satisfactory handling of the commercial paper which must be transmitted from bank to

bank for collection and, what is more important, to enable the banks to draw upon each other's resources, to the advantage of all concerned, in the making of loans.

The country has been divided into twelve districts, in each of which there is established a Federal Reserve bank with such branches and agencies as the business of the district requires. The Federal Reserve banks are established in Boston, New York, Philadelphia, Cleveland, Richmond, Atlanta, Chicago, St. Louis, Minneapolis, Kansas City, Dallas, and San Francisco. The various commercial banks of the districts are the stockholders in the Federal Reserve banks. The former are known as member banks. The national banks are required by the law to become members, and many state banks and trust companies have voluntarily entered the system. The Federal Reserve banks are, therefore, banker's banks, and their principal purpose is to supply funds to the members as their needs suggest and to make possible an interchange of credit between the banks in one part of the country and those in another. While the Federal Reserve banks are controlled by the member banks of the district, there is over them as an agency of general supervision the Federal Reserve Board at Washington. This board is appointed by the President and includes in its membership the Secretary of the Treasury and the Comptroller of the Currency.

The Federal Reserve banks act as fiscal agents of the United States Government, they make loans to the member banks by the process of rediscounting, they deal directly with the public in a certain so-called open market transaction by which loans are made on commercial paper which has not gone through the hands of a member, and they issue notes which circulate as money. The full explanation of these activities awaits the study of the clearance of payments and the nature of loan transactions.

THE SAVINGS BANK

The savings bank is a separately organized institution for the purpose of collecting the small surpluses of many types of consumers who desire to maintain an emergency fund or to make an investment at interest. The individual deposits generally are small, and since they all bear interest, the requirement is that they must be left for a definite length of time. This is especially neces-

sary in the case of the savings bank, since the bank makes loans for longer periods than the commercial banks ordinarily do. As a matter of safety and for the sake of continuous income, the assembled funds are usually invested in bonds or farm mortgages. Very generally, in practice, deposits may be withdrawn at will; but if withdrawals were too frequent, the savings bank would need to limit them until it could recover funds by the sale of notes or securities. Even from this brief statement, it is clear that the savings bank is intended to meet a particular need of the lending public rather than of those that borrow.

There are three types of savings banks. Some are organized as corporations and issue stock to be purchased by those interested in the control of the banks. Dividends are paid upon this stock. Others are mutual banks. They are cooperative from the standpoint of the depositors and are controlled and operated by a board of trustees. The earnings from the operation of the bank are paid in full to the various depositors in proportion to their holdings. Such banks are found chiefly in the northeastern states. A form intermediate between the two just mentioned involves a combination of the stock and mutual principles. In a large part of the country, savings are received in a special department of the commercial banks, and no separate institutions of the sort described are to be found. Additional provision for the small savings deposit is made by the Postal Savings Division of the Post Office Department. The post offices receive deposits from $1 up to $1,000, ordinarily, and pay 2% on all funds which have been on deposit for a year. They deal only with individuals and not with business concerns, and their service has been particularly useful to immigrants unfamiliar with American banking methods but acquainted with postal savings banks in Europe.

THE TRUST COMPANY

Trust companies exist primarily to act as the trustees of funds left on deposit with them. Their relation to the depositor is very personal. The company is his agent and, as trustee, stands in a peculiar relation to him under the law. The trust companies are empowered to act as executors and administrators of estates; as guardians of the property of minors; as fiscal agents for governmental bodies, such as municipalities, counties, and the states;

and as agents for corporations in the making of disbursements, in the registering of stocks and bonds, and similar matters. They may receive funds intended for marriage settlements, funds deposited by the courts in the interest of minors, funds in litigation, deposits made under lease contracts, and mortgages to be held as security for such loans as are evidenced by corporate bonds and similar long-term paper. Trust companies are not to be confused, of course, with the combinations of corporations called "trusts."

Trust companies nowadays do a general banking business, receiving deposits and providing services as numerous or even more numerous than those of commercial banks, though the latter also now have trust departments. Trust companies acting in their capacity as trustees serve, however, particularly those depositors who have large sums which for special reasons require careful administration. They serve the needs of the borrower only as they seek him out in order to place these funds at interest to good advantage.

AGENTS OF THE BORROWER

The commercial banks are of equal assistance to payer and payee and accommodate both borrowers and lenders. Savings banks and trust companies specialize in making provision for certain classes of lenders or investors. The remaining elements of the financial organization are specialized in aid of the borrower. The borrowers are of many types and of many needs. So are also the lenders, for that matter; but except for those that deposit funds in the banks already described, the lenders are more likely to be people of some wealth and leisure or business houses of some size. These are able themselves to manage the investment of their funds. At least, they are in a position to make selections among the offerings of the various houses which are agents of the borrower primarily, and they need no general deposit bank in which to place their surplus funds.

COMMERCIAL PAPER COMPANIES

Among the borrowers with special needs are those with short-term notes to be negotiated. There are certain financial con-

cerns which are interested in meeting the requirements of these borrowers but which do not attempt to provide the many services of the commercial bank and do not receive deposits. They take the notes and bills which the customer desires to discount, that is to say upon which he hopes to receive a loan, and place them with banks or other financial institutions or even with such private investors as may be possible. They enable borrowers, who cannot be accommodated by the local banks because of the latter's lack of funds, to procure funds, and sometimes they handle paper which the bank is unwilling to take directly upon such security as the borrower alone is able to offer.

The simplest organization of this sort is that of the note or bill broker. He is an individual who buys from business men notes of sizes probably from $2,000 upward and running from three to six months, and sells these to some bank for a commission of from one-eighth to one-fourth per cent. If he is a true broker, he does not himself buy these notes outright but acts simply as agent in disposing of them. There are "commercial paper companies," however, of more elaborate organization and doing a more extensive business in obligations similar to those handled by the commercial banks. There have arisen recently, also, many financial companies known by such names as "commercial credit companies," "finance corporations," and "discount companies," which advance money to those who are selling goods on credit or on the installment plan to consumers. The companies accept as security the accounts which stand against these customers or the notes which they have given the seller in payment. By the aid of such concerns, loans are made on furniture and automobiles by dealers who are in no financial condition to extend as much credit as the customers demand.

AGENTS OF THE INVESTMENT BORROWER

The remaining special borrowers are those seeking funds for investment as permanent capital in their productive enterprises. We refer to these as investment borrowers, and in so doing we use the word "investment" in the sense in which it is used generally in the market. We know that all funds which are used to buy goods to be put to work in production, strictly speaking, are invested; but people generally consider only relatively long-term obligations

as important enough to be regarded as investments, and they use the word in the limited sense of a relatively permanent loan.

Mortgage banks or companies are those that lend money on the security of city real estate. Some of these lend on notes secured by mortgages and sell the notes to investors, thus acting simply as an intermediary in the transactions. However, others guarantee the investment to the buyer of the note, and some of them continue to interest themselves in the matter until the note is finally paid or renewed at maturity. Some companies lend on first real estate mortgages in large sums. They then issue certificates in small denominations which they sell to investors. They continue to hold the mortgage themselves as trustee for those who buy the certificates. Such financial agencies as these are particularly helpful to those who desire to build business buildings, apartment houses, and even small industrial plants.

Building and loan associations are organized to lend to those who are building residences of comparatively small cost. The true building and loan association is a borrowers' cooperative organization. The members buy stock on the installment plan. The funds thus acquired are accumulated and are loaned only to members. If business prospers, they may receive dividends on the stock. Many building and loan associations, however, do not lend strictly on this basis, and they become institutions very much like the savings bank. They have numerous depositors who are interested simply in the interest on their deposits. They lend on the security of real estate as savings banks often do. The loans of the associations differ from those of the banks in this particular, however, that they are confined to those who offer as security one class of real estate alone, and in this also, that the loans are repaid in installments each of which covers a part of the principal and the current interest.

Concerns that deal in notes secured by mortgages on farm lands, as an aid to the farmers in procuring long-term credit or even working captial, will be described presently under the title of agricultural credit. There are mortgage companies, however, that exist to make loans upon the security of live stock or similar resources of income to the farmer. Their purpose is to supply capital to live stock producers, for instance, who are preparing animals for the market. With the aid of these companies, the producers are able to buy cattle, and the companies procure the funds by

selling the notes and mortgages to banks or to other investors.

The agent of the corporation, especially the great corporations, in the marketing of bonds and stocks is the investment banker. The establishments maintained by these bankers are not commonly known as banks but rather as banking houses or banking companies. The name of the concern is very generally in a form used by business establishments of other sorts, as, for instance, J. P. Morgan & Company. While banking houses are organized to engage in more than one kind of financial undertaking and, in a limited way, provide services similar to those offered by commercial banks, their primary function is to aid corporations in acquiring their permanent capital. They are supported by their own resources, often very great in amount, and they frequently are able to attach to themselves a clientele consisting of people with large incomes who are able constantly to be in the market as buyers of securities. The banker often takes the entire issue of stocks and bonds of a new corporation or a new issue of securities by an old corporation and disposes of it through any one of several plans directly or indirectly to the investing public.

THE AGRICULTURAL CREDIT ORGANIZATION

By an act of Congress in 1916, twelve Federal land banks were established. Each of these banks may have branches in its own district. The principal banks are established at Springfield, Massachusetts, Columbia, Baltimore, Lousiville, New Orleans, St. Louis, St. Paul, Omaha, Wichita, Houston, Berkeley, and Spokane. To cooperate with the twelve banks, farm loan associations are organized. These are associations of borrowers who are making use of the land banks. They have their directors, officers, and a loan committee. The credit extended by the land banks is intended to be cooperative from the standpoint of the borrowers, and these loan associations pass upon the loans of their members and jointly provide the security. At the head of the entire system is the Federal Farm Loan Board which conducts a bureau in the Department of the Treasury at Washington. The Secretary of the Treasury is a member of the board. It was expected that the public would subscribe to the capital of the land banks, but on its failure to provide as much as was expected, the Federal Government purchased shares. Shares held by the government and by

the local associations entitle their owners to a vote in the election of the directors and in the control of the banks.

At the same time, the law provided for the incorporation of joint stock land banks. These banks are subject to the supervision of the Federal Farm Loan Board but they are essentially private banks. They must have a capital of $250,000 subscribed by at least ten persons. In addition, they may issue bonds by way of providing more funds. They lend on farm land security for any purpose, but the loans are in no sense cooperative. These banks compete directly with the Federal land banks. It may be added that there are also state land banks and farmers' cooperative credit unions to a limited number in certain parts of the country.

By a law of 1923, there was created a system of Federal intermediate credit banks. In each of the twelve districts mentioned above there has been established a bank to act in a sense as a wholesaler of credit. These banks do not deal directly with the ultimate borrower, but supply loans to other banks which deal with the farmer. All banks, both agricultural and commercial, which make loans to the farmer may replenish their resources by drawing upon the intermediate credit banks. The capital for each of these banks, $5,000,000, is furnished by the Treasury of the United States. Bonds to procure additional funds may be issued under the law.

The intermediate banks are subsidized by the government and are intended to take care of the general needs of the farmers, particularly in the matter of short-term loans. At the same time, provision was made for the incorporation of national agricultural credit corporations. The capital of these banks is to be provided by private subscription, and while they come under the supervision of the Comptroller of the Currency, they are competitors of the intermediate banks. Though the credit corporations may not undertake to deal directly with other banks, it is expected that they may aid cooperative associations and other large agricultural organizations needing credit for a period of from a few months to two or three years.

PERSONAL LOAN BANKS

It is possible for those who are established in business but who need loans for strictly personal uses to borrow in the same way

that they do in connection with their regular business transactions. They ordinarily have property and business income which make them acceptable customers at the banks. There are others, however, not known to the banks, who find themselves in need of money to meet an emergency and who would be unable to procure assistance except for certain financial concerns which specialize in personal loans of this sort.

These people may have resort to the pawnbroker. He is the oldest of the bankers. He lends upon the pledge and deposit of personal property, and himself supplies the entire capital to be used for this purpose. The business of the pawnbroker is regulated by law, and he is required to keep a record and make report of each transaction. These regulations are partly to protect the borrower and partly to protect the public from the disposal of stolen property by this means. The business of the pawnbroker in a few cases has been taken over by organizations which hope to make it more useful to people in actual need. They have created new banks under such names as "workmen's loan associations," "collateral loan companies," and "provident loan societies."

The "loan shark" is a private banker lending money on unsecured promissory notes, on notes secured by a mortgage on household goods, or by some claim against the borrower's income. The loans are repaid in installments and are generally for a duration of less than a year. The interest rates charged have generally been so exorbitant as to put these organizations outside the protection of the law and to give them the name under which we have introduced them. Their methods and conduct in general have met with proper condemnation.

To meet a similar need in a better way, the Morris Plan banks are now to be found in many cities. The first was established in Norfolk, Virginia, by Arthur J. Morris, who was interested in providing credit to men of small means. Loans are made to wage earners and men of small salary upon their notes endorsed by two men of good character. These endorsers need not be people of high financial rating, but may also be wage earners. Only the legal rate of interest is charged, though because of the method of repayment, the actual rate is much higher. The higher rate is the result of the fact that repayment is generally made in installments, and that interest continues on the entire loan until the final installment is paid.

THE FINANCIAL SYSTEM

The enumeration and description of financial institutions, so far, sets forth the principal types with which the public ordinarily has to deal. They have been grouped by the nature of their organizations and the scope of their operations. It appears that there are concerns to accommodate the lender of the smallest sum —the immigrant with a dollar to deposit in the postal savings bank. There are those also to administer great fortunes left with them in trust. Some provision is made for every type of borrower, for the consumer of small means and in great need, for the householder seeking a loan on a house or an automobile, for merchants requiring small capital for their daily disbursements, for farmers buying land or stocking their farms, for great corporations, and for state and national governments with million-dollar flotations of securities to be sold.

It is obvious that the several services of the financial organization differ in their importance and in their economic significance. A well-balanced financial system will provide in some measure for them all, nevertheless. Just how this should be done is a question. The financial institutions, under one plan, may be left to their own development. Under such a plan, one of three or four combinations of results may follow. We may have a great concentration of financial activities in (1) a few concerns and in (2) concerns of a single type, or there may be established (3) numerous kinds of banks and associations and (4) many small concerns to take care of our financial needs. Under a second plan, the government may interest itself in the organization of a system of banks. It also may concentrate many functions in a few banks either of one or of several kinds, or it may create a system of many parts in which the units either all have the same functions or are highly specialized to serve different purposes. If the government intervenes in this part of the market's activity, it may choose to absorb the control entirely, or it may undertake only to regulate and supplement such financial organization as exists by private initiative. It is possible for the development of the financial machinery in any case to proceed along the line either of providing greater facilities or of changing the nature of the organization itself. In the latter case, there may be more government participation, a larger development of the cooperative method, or an increase of the interest of

numerous people in the ownership and management of the banks. These three may go somewhat hand in hand.

To a surprisingly large extent, the banks of the United States have been controlled by local interests in the communities in which they were established. As a rule, there have been no great financial concerns operating branches in many cities and in the small towns throughout the country. The branch banking of California is a noteworthy exception. Furthermore, the banks that have existed in the smaller communities have not been controlled by local magnates alone or even by single financial interests. Their stock has been held by many people, and in some parts of the country the majority of the bank stock, even in states with very large cities, has been held by the farmers. The system has been one of decentralization in so far as actual management goes, and, consequently, thousands of banks of relatively small capital have served the financial need.

On the other hand, the control has not generally been of the cooperative order. There are, of course, the mutual savings banks and the building and loan associations. There have been organized recently, also, credit unions which enable small borrowers to get funds for other than building purposes upon a plan similar to that of the building and loan association. There are cooperative associations in the field of farm borrowing. Nevertheless, the system of non-cooperative control has prevailed in the past and continues in the present.

In a sense the recently developed "investment trust" is a cooperative enterprise. People having such funds to invest as might be used to purchase corporate securities place them for that purpose with trustees established to handle such business on a large scale. The trustees combine the separate sums thus received, buy and hold securities, and issue certificates instead to the investor. These investment trusts, however, have no very large place in the financial organization.

An extension of popular control in financial institutions has appeared very recently in connection with the labor bank movement. In several cities labor organizations have opened banks capitalized at figures which put them immediately upon a basis of competition with other banks. The resources of one of these banks approaches $25,000,000. It appears that this is not an attempt in any way to establish cooperative credit, but is simply the creation of an inter-

est in financial affairs among industrial laborers similar to that which has existed among the farmers for many years past.

In recent years, the most important development in the field of finance has been the growth of the Federal power over the financial organization. Some of the legislation affecting banking has arisen out of very special circumstances and has resulted from pressure upon the central government. Thus, the difficulties of the farmers, following the war, gave impetus to the movement for better facilities for agricultural loans. Similar causes promoted the interest of the people in foreign banking and investment and led to Federal legislation. It was the establishment of the Federal Reserve banks, however, as the outgrowth of a long and careful study of our financial needs, that gave us the first attempted systematization of our banking machinery.

XVIII

THE CLEARANCE OF PAYMENTS

Methods of simplification. Commercial bank deposits and clearance. The clearing house. Interregional clearance of checks. Domestic exchange. Premiums and discounts in domestic exchange. Foreign exchange. Foreign trade bills in triangular trade. The rate of exchange. The rate of exchange and monetary inflation. The balance of payments. The foreign exchange market.

WHEN trade is by barter, payment is simple and direct, and to that extent the method of barter is economical. Therefore, if it were generally possible to effect the exchange of goods satisfactorily without the use of money, it would be economy to do so. The market would then require less machinery than it now has, and its operations would be less complex. As a matter of fact, however, the use of a medium of exchange is itself an economy, even though it involves indirect payment, since only by some such means is it possible to make demand properly effective in the modern market. All that has been said in explanation of the need for a medium of exchange is to that effect. It has been found desirable, furthermore, to create an elaborate system of private credit instruments to be employed in addition to, and partly as a substitute for, other elements of the medium, even though the use of such instruments complicates the process of payment.

Two principles to be applied in the financial administration of the market are suggested by these observations. The financial organization, the medium of exchange, and the methods of payment should be adequate to meet the needs of trade no matter how extensive, how elaborate, or how complicated respectively these elements may need to be. On the other hand, there is economy in the greatest possible simplicity of machinery and directness of method consistent with satisfactory service, and the perfection of the process of payment requires the elimination of every unnecessary use of money and every avoidable delay in payment.

Some of the things to be said in this chapter will emphasize the variety of method and the intricacy of the process of making payments. We shall make no attempt, however, to examine this phase

of economic activity in all its technical detail. For that matter, no phase of economic activity is to be so examined in this treatise. We shall have a fair understanding of the administration of payments from the standpoint of the market if we come to know, first, the principal methods of payment in use and, secondly, the nature of the procedure by which the settlement of obligations arising from trade is simplified. Both points may be gained if our discussion is made to turn upon the latter, as it seems proper it should when the collective administration of payments is the subject in hand. The necessities of trade cause the elaboration of method, but the financial organization is concerned in this connection principally with the facilitation of payments and the simplification of the process.

METHODS OF SIMPLIFICATION

1. When certain traders are accustomed to deal with one another with great frequency and regularity, many payments may be avoided by the keeping of open book accounts. Thus, the country store, which formerly dealt with farmers both as buyer and seller, generally kept a record of its transactions with each customer over a considerable period of time, and only at infrequent intervals was it necessary to make cash settlements. The credits and debits for the produce brought in by the farmers and the groceries taken in trade were kept nearly in balance. As a consequence, many farmers got along with almost no currency and made little use of credit instruments in minor purchases and sales. The transactions between the farmers and the country store were not of the nature of barter, for valuations were made in money, and goods were not traded directly for goods. Yet many payments were avoided by the postponement of settlement until such times as obligation equaled obligation.

The open account is used in modern business also. Those who trade at retail stores still make settlements at stated intervals and thus combine into one the payments for many purchases. A certain few of the retailers, likewise, are permitted to buy from wholesalers and manufacturers on open account. It is true that the open account as now used does not always signify a reduction of the number of payments to be made. In some cases, a single purchase is charged to account, and the situation is simply one in which a

loan has been made to a customer without a credit instrument to represent it. There may be very great objection also to the use of open accounts in this way. However, the true open account method and periodic settlement of balances is an important and economical feature of our present financial practice. The economy of its use is to be revealed further as we proceed.

2. Every transaction involving payment by means of a private credit instrument is concluded, presumably, by a final settlement in money. Thus, if one gives his notes in exchange for goods, it is expected that the holder of the note, whether he be the seller or someone to whom the note has been transferred, will receive cash at the time when the note falls due. In a sense, the note is a temporary substitute for money. There is no economy in the use of a private credit instrument of this sort instead of money except as it may be easier and safer to handle. However, if the note should be transferred to one in debt to the maker and be used by him in making payment to the maker, the note could be canceled finally without the use of any money. Thus if A made a note which he delivered to B in payment for goods, and B in turn gave the note in payment to C who was already in debt to A or who made use of the note to buy goods from A, three transactions would have been completed without the use of any money at all. In similar instances, part payments in cash might need to be made by the several persons or by some of them at least in a ring, say, of ten persons; but some saving would have been effected at that. The procedure described is the "ringing out" of payments.

3. If one were to draw a bill or draft upon his customer in favor of himself and the customer accepted the draft, the instrument would be of the same effect thereafter as a note and might circulate as in the instance used for illustration in the paragraph above. On the other hand, those who draw upon people to whom they have sold goods, requiring payment to a third party to whom the drawer is himself in debt, are able to avoid the use of money to some extent in a way quite different from that described above. Let us suppose that B, instead of receiving a note from A, draws upon A and gives the draft to C to whom B is under the necessity of making payment. C then collects from A, and, as a result, A's obligation to B and B's obligation to C are settled by one payment of money where two such payments would have been required if

cash had been used. This is the method of substitutional payment. The diagrams in Figure 35 illustrate the difference in this and the ringing out method and indicate the circumstances in which each is likely to be used.

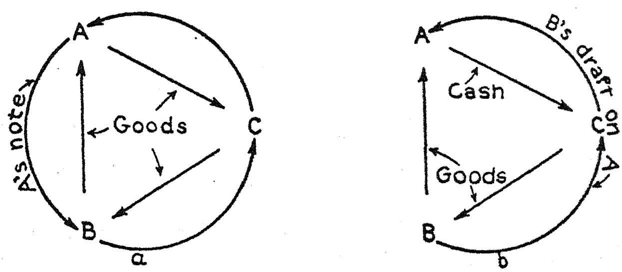


Figure 35: (*a*) The ringing out of payments and (*b*) the method of substitutional payment.

Since drafts once accepted are capable of wide circulation and since they may be presented to the drawee in cancellation of some claim he has against the holder rather than for cash redemption, payments often involve a combination of the two methods just illustrated.

4. If each of the persons involved in the ringing out procedure owed exactly the amount that was due him, the entire series of payments even by credit instruments might be eliminated. Suppose that A owes B one hundred dollars, that B owes C, C owes D, D owes E, and E owes A, each the same amount. In such a situation, no payments are really necessary, since each is to receive and pay out the same sum of money and after payment stands exactly where he was in the beginning. If the several individuals engaged in trade did not owe equal amounts, it would still simplify matters a great deal if only the difference between what each was to receive and to pay was to enter into the stream of payments. To accomplish this final simplification, it is necessary to return to the method of the open account and designate someone to keep the books upon which the debits and credits of the various payers and payees may be balanced and by means of which the differences to be settled in cash can be ascertained. This is the method called the clearance of payments.

Since all differences may be determined simultaneously when central accounts are kept, the method of clearance permits a more

rapid extinguishment of obligations than does the comparatively slow ringing out procedure. In fact, there is no certainty in most instances that payments would ever finally complete the circle as is necessary in ringing out—in which case, cash payments would be made that could be avoided if there were clearance. The simplest form of open accounts is likewise inferior to clearance, since the books of the merchant permit a balancing only of the reciprocal obligations of two persons, while by the method of clearance all incoming and outgoing payments of any individual or concern may be taken into account.

In practice, we do not often have such a simple series of transactions as we have assumed for illustration. Each person owes several others and has claims against still others, and the amounts are very unequal. Furthermore, there is no central agency for keeping book of the original trading transactions of the entire market. If settlement is not to be made in cash in each case, some credit instrument at least must be given in acknowledgment of the debt and as a means of payment. Yet it is possible by the method of clearance to avoid the conversion of all of these instruments into cash as would otherwise be necessary. Within the financial organization is to be found the machinery by which this is accomplished.

COMMERCIAL BANK DEPOSITS AND CLEARANCE

The commercial bank serves as a place of deposit for the surplus cash of the community in which it is located. It is the practice in making immediate payments to draw checks on the bank in favor of those to whom payment is to be made, and nearly everyone in regions of commercial activity pays by check to some extent. This in itself is substitutional payment. Let us assume for the time being that there is only one bank in the community. By reason of the practice referred to, this bank becomes an agency through which all payments are made. It is the custom also for people to deposit with the bank, presumably for collection, all incoming checks which are acquired as salary, wages, dividends, or as the result of sales. The checks they receive as well as those they give are drawn on the one bank. If people were to cash these checks rather than to deposit them, they would find themselves removing money from the bank only to redeposit it to cover their

own checks, obviously a useless maneuver. Therefore, since practically all those dealing with the bank have funds on deposit, payment is made in behalf of those drawing checks on the bank by subtracting the proper amount from the funds credited to the drawer and adding it to the deposit of the payee. A collection is simply the same procedure viewed from the standpoint of the one depositing checks drawn in his own favor.

Under such circumstances, payment is largely a matter of bookkeeping, and little cash is required. The bank maintains book accounts for all the traders so far as immediate payments are concerned. It offers a similar service for deferred payments as well. While checks and other instruments must be drawn by those who have payments to make and must be presented by the payees to the bank upon which they are drawn, no funds need be transferred from one account to another except as one has a surplus of checks in his favor for the day and some other one, with whom, incidentally, the first may have had no dealings whatever, has fewer deposits than withdrawals. One pays each day, therefore, only in case his total outgo is greater than his total income, regardless of the specific transactions involved, and receives only when the situation is the reverse. But the matter is even simpler than our statement may have indicated, for the bank does not actually transfer any funds from one depositor to another. Such cash as the bank has is in one fund, and the bank, after clearing the checks, only increases or decreases the claim of the depositor against the bank by proper entries on the books.

Where there are several banks in one community it is impossible to create accounts for all the people in one set of books. It becomes necessary to extend the system of clearance by providing for the transfer of funds between the banks. One is permitted to deposit any check in his own bank, no matter upon what bank it is drawn, and have it credited in his favor. In all particulars, so far as the individual is concerned, the method of payment is the same. He receives his income in the form of credit instruments and makes his payments in the same way. The offset of one instrument against another and of total against total is effected among the banks by the exchange of the checks that have not been presented at the bank upon which they were drawn. Only the differences need to be transferred from bank to bank in the form of cash. In small towns and villages, the banks make this exchange

of checks and transfer of funds by means of a messenger. Larger cities make use of a clearing house.

THE CLEARING HOUSE

There is a great saving in the handling of money by the use of checks and bank deposits even though it is necessary to make collections from bank to bank by means of messengers. However, it is possible to apply the method of clearance to the payments to be made between the banks themselves. Therefore, when the payments involved are great enough to justify it, a clearing house is organized. A room is provided where the messengers of all the banks may assemble for the exchange of checks. Each brings the checks which his bank holds against the other banks. These checks are distributed to the messengers of the banks concerned. Thus each disposes of the checks he has brought and receives all of those which his bank is expected to pay. He then makes a total of those he has received and compares it with the total of those he has distributed, and reports to the officer in charge. The final balancing of payments is made on the books of the clearing house. If he has presented more for collection than were presented against his bank, he makes one payment to the clearing house association. If the situation is the reverse, he receives a payment from the association. By this procedure, the banks not only are saved the burden of collecting by the slow and risky process of visiting each bank, but they need also to make only one transfer of funds in settlement of all differences.

In order to avoid the carrying of money to and from the clearing house each day, the banks may maintain a deposit with the treasurer of the clearing house. The funds so deposited may be kept in some bank rather than in the treasury itself. In either case they are represented by clearing house certificates, and these are used in making the settlements after clearance. This is not the invariable practice, however. In some cities, the manager of the clearing house draws drafts on the banks which have payments to make in favor of those to whom payment is due. The latter may then collect in any way they desire, as, for instance, by depositing the drafts in a Federal Reserve bank.

The method of settlement we have described is being superseded as a result of the growth of the Federal Reserve system. In

the cities where there are Federal Reserve banks, the member banks make use of their deposits with the former in settling their balances at the clearing house. The manager of the clearing house may send a statement to the Federal Reserve bank and upon the basis of this statement the accounts of the various members are debited and credited by way of final clearance. Even in other cities, checks on a Federal Reserve bank are satisfactory in settlement of clearing house balances, since so many of the banks are members of the Federal Reserve system and keep their reserves on deposit in the Federal Reserve banks.

Small banks in the suburbs of cities whose total transactions do not justify membership in the clearing house itself have the advantage of the use of the clearing house by presenting their checks to one of the member banks which takes them through the clearing process.

INTERREGIONAL CLEARANCE OF CHECKS

For a long time it was customary for banks throughout the country to maintain deposits with large banks in such cities as New York, Chicago, and St. Louis. When a so-called country bank received checks drawn on banks in other places, it sent them to the correspondent bank in the city. This bank then undertook their collection and added the funds thus received to the deposit of the smaller bank. Likewise, the depository bank received checks drawn against its country correspondents and in paying them subtracted from the deposit of the bank concerned. These checks were all cleared through the clearing house of the city in which the depository banks were located. Thus, if a check were presented to a St. Louis bank by one of its country correspondents to be collected from a bank with which the St. Louis bank had no direct relations, it was transferred in the clearing process to that St. Louis bank with which the drawee bank kept its deposit. In this way, all checks were brought to the proper bank for their final disposition. This was a fairly satisfactory process, but it was comparatively slow, and there was a serious loss of time between the first payment on the check by the bank to which it was presented and the final collection of the amount from the bank against which it was drawn. There were inevitable collection charges, therefore, to compensate for the trouble and the loss of interest upon these

funds. Occasionally, also, checks were to be collected only by direct correspondence with the drawee bank, since not all banks kept deposits in the same central city.

The Federal Reserve system has greatly improved the procedure of interregional clearance. Since the great majority of the banks of the country are members of the system and have deposits in the reserve banks, the reserve banks can make collections and payments on checks transferred from city to city simply by crediting and debiting the accounts of the members. These checks are credited to the account of the bank presenting them after the lapse of only as much time as would have been necessary to collect them. Collection charges are eliminated, since it is considered desirable that there be the greatest possible freedom in the making of payments between one city and another and as nearly the same freedom as there is within each city itself. While this has come to be the prevailing method of intercity clearance, it is only the checks of member banks, and of non-members consenting in full to the plan, that are handled in this way.

When a check drawn upon a bank in one Federal Reserve district is received by a bank in another, the services of a single Federal Reserve bank are not sufficient to effect a clearance. This matter is now handled by the Federal Reserve Board at Washington. The bank making payment on, or cashing, the check presents it to the reserve bank of its own district. That bank totals all the checks against banks in other districts which it has credited during the preceding day to the Federal Reserve banks of those districts and reports the amount to Washington. All the banks of the country report by wire at 10 o'clock a. m., eastern time. The amounts reported in this way are credited or debited on the proper accounts in much the same way as the clearing house of a city balances the statements of the associated banks. A gold clearance, or gold settlement fund, is maintained by the Federal Reserve Board. The fund is created by deposits from the Federal Reserve banks for the purpose of settling balances arising in the course of clearance.

DOMESTIC EXCHANGE

While the system of clearance just described has made possible a wider use of checks, with a saving in the amount of cash trans-

ferred from hand to hand, and has caused the substitution of checks for other commercial paper to some extent, not all payments are to be made by that means alone. There is still use for bills of exchange of other sorts and for notes. Obviously, time obligations are required in transactions involving deferred payments, and demand instruments other than checks serve various purposes in trade.

Collections may be made locally by those who, as payees, hold credit instruments other than checks and bank drafts by giving notice directly to the makers of the notes, or drawees of the bills, and accepting cash or checks in settlement. Or, use may be made of the financial machinery of the community. A bank may be willing to buy, or discount, the paper, in which case it credits the seller with an amount determined by subtracting interest for the remainder of the time the obligation is to run, if any, and such charges for collection as may be necessary or customary. The bank then undertakes to collect and gives notice at the proper time by mail to the one expected to pay or presents the instrument directly to him by messenger.

Commercial bills and notes enter into the making of payments between persons in different communities as well as in local transactions. They are supplemented by banker's bills, or bank drafts, express money orders, and other paper designed to meet certain special needs. The methods of making collections and payments in interregional trade when these instruments are used are very similar to those set forth in the paragraph above, and the procedure for the clearance of these payments is somewhat the same as that for the clearance of checks. The differences are great enough, however, to call for further treatment of the subject. In intercommunity payments and clearance, orders to pay other than checks are known as "domestic exchange," a name arising out of the necessity of distinguishing the paper used entirely within the country from that employed in foreign trade.

The final step to be taken in settlement of an obligation to pay when the parties are in different places may be taken either by the buyer or by the seller. The buyer may send money by mail or express, or may pay by check. We need give no further attention here to these possibilities. He may send a note to be collected at maturity, at which time, of course, payment is to be made by cash, by check, or by some such method. Finally (the matter of most

interest now), he may pay by sending a draft. The draft which he sends is necessarily either one he has drawn on some person who was in debt to him, living most likely in the city in which the drawer has to make payment, or one drawn by someone else which he, the buyer under consideration, may purchase for his own use. In the latter case, the draft may be a commercial bill which is drawn against someone in the town where payment is to be made by the one purchasing the draft, or it may be a draft drawn by one bank on another.

To explain further the method of payment by draft, let us suppose that Black in Boston has sold goods to White in Baltimore and that Wade in Baltimore has sold goods of the same value to Bell in Boston. White may make payment to Black by buying from Wade a draft which Wade has drawn on Bell and sending this draft to Black, who will collect from Bell. If no such credit as this is available, White may buy and send a draft drawn by a Baltimore bank against its correspondent bank in New York City. Black may then collect by presenting the draft to a Boston bank. This bank pays the draft and sends it to its New York correspondent, which, if it is not the very bank on which the draft is drawn, collects through the clearing house as it would collect on a check.

If the seller is to take the first step in securing payment, he draws a draft on his customer. Sometimes he needs to do this to compel an unwilling customer to pay. Generally, the draft is drawn by prearrangement with the debtor and with his consent. In the illustration just given, Wade was undertaking to collect by this method. Generally in domestic trade, however, those making remittances buy bank drafts, and those drawing on customers do not expect to sell commercial bills to traders. These bills are presented, rather, to the banks for collection. The drafts may be either demand (or sight) bills, or time (or date) bills. In either case, the drawer may receive his money either at once, after the bill has been accepted by the customer, or only after payment is actually made by the drawee. The bank purchasing the draft sends it to a correspondent bank in the other city for collection. The Federal Reserve banks now have departments for the collecting of maturing notes and bills.

Payments made by such methods as these avoid the shipment of money from place to place. White in Baltimore was able to pay

Black in Boston simply by drawing a check in favor of Wade with a resulting debit and credit of accounts in the banks of Baltimore. Bell in Boston, settled with Wade by giving a check to Black. No funds were transferred from one city to the other. By the use of a bank draft, payment was made by a transfer of funds from one bank to another in New York City, or possibly by a debiting and crediting of accounts in the clearing house or the Federal Reserve bank in that city.

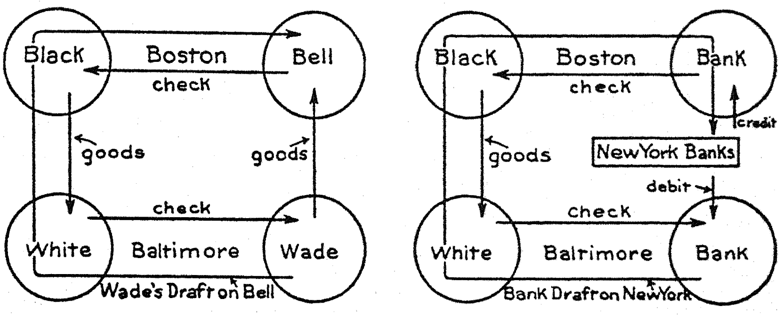


Figure 36: Domestic exchange.

PREMIUMS AND DISCOUNTS IN DOMESTIC EXCHANGE

The effect of the use of bank drafts in these payments is to change the amounts which the various local banks have on deposit with their correspondents in the central cities. When payments are being made by drafts purchased in Baltimore, the Baltimore banks are increasing their funds at home and decreasing the amount which they have in New York. The result is just the reverse for the Boston bank which pays out money in cashing one of these bills of exchange. If the Baltimore banks are anxious to accumulate funds in Baltimore because of the higher interest rates there, they are very willing to sell drafts. If the demand for loans is slack in Baltimore and interest rates are higher in New York, they can accumulate funds in New York by cashing drafts, that is to say by buying them. If no drafts are available, they can accomplish these transfers only by shipping money. This involves a cost. There are such items as express charges, insurance, and interest on the funds while in transit. Therefore, rather than to ship money, they can afford to buy drafts or bills at a premium, and

this premium may be as high, but no higher, than the cost of shipping. Likewise, under other circumstances, they offer drafts at a discount which may amount to as much as the cost of withdrawing their deposits from New York by the direct transfer of cash. Whether or not domestic exchange would sell at a premium or a discount would depend, therefore, upon the state of the bank's funds at home and in New York, and the amount of the premiums or discount would be fixed, within the shipping cost limits, by the demand for and supply of the bills of exchange.

That these premiums and discounts are not more important today is due to the fact that transfers of money can be made now through the Federal Reserve banks. Drafts on correspondent banks are still important in the transfer of amounts below $1,000. However, when large payments are to be made, telegraphic transfers are more likely to be used. One deposits funds with his local bank equal to the payment to be made elsewhere, and that bank sends a message to the Federal Reserve bank requesting a transfer of funds from the account of the former bank to the account of the bank of the payee, which makes the final payment. The gold settlement fund is a means by which these large payments can be cleared, when more than one reserve district is involved, without frequent shipments of money between the various Federal Reserve banks. It is necessary only to advise the Federal Reserve Board of the amount of the payment which is to be made and the proper accounts to be debited and credited. Any member bank when selling bank drafts may make use of this method in depositing funds to cover the drafts. Telegraphic transfers save much time and some of the risk involved in other methods of payment. In fact, funds may be transferred so easily in this way that little need exists for premiums and discounts on domestic exchange. The fees charged, in so far as there are any, are now generally payments only for the accommodation and service of the bank.

FOREIGN EXCHANGE

The differences between domestic and foreign exchange lie chiefly in the technical details of the credit instruments used and the methods by which they are transferred from bank to bank. In all essentials, the method of payment is substantially the same in both branches of commerce. Nevertheless, the differences are

great enough to be noteworthy. They arise not only out of the dissimilarity of trade practices, which could hardly be expected to be the same in trade between countries as in the internal trade of a particular country, but also from the absence of a uniform monetary system for the entire world. Furthermore, the relations between the financial agencies of the various countries are based upon no comprehensive scheme of systematized activity such as characterizes the Federal Reserve system of the United States.

The methods of payment in foreign trade are unlike those of the domestic trade of America, first, in that settlements in foreign trade are not made by check, and there is no clearance either by additions and subtractions on the accounts of the traders themselves or by international clearing house operations. Payments are made by the use of "exchange" alone, by such instruments as are known to local commerce, though in other forms, in greater variety, and under somewhat different names. Thus, commercial drafts are trade bills, and bank drafts are banker's bills. In the second place, credit instruments are often written in the language of a foreign monetary unit, and their values need to be translated for quotations in terms of American money. Thirdly, premiums and discounts upon these obligations are the rule rather than the exception, and settlements must frequently be made by the shipment of gold.

We may illustrate the nature of foreign trade payments by assuming a situation in which a merchant in New York has bought goods in London. It is customary for those who import goods from England to make remittance and for those who export to draw upon their English customers. In this case, the New York man is expected to remit to the London seller either by buying a bank draft or a trade bill arising out of a transaction in which some other New York merchant has sold goods to England. New York banks maintain deposits with the banks of London and consequently are in a position to draw drafts upon their London correspondents to enable American importers to make remittances when trade bills are not available or when for any reason they prefer banker's bills. Let us suppose that a commercial draft or trade bill is to be used rather than a bank draft. The procedure to be followed is the same as that described in connection with domestic exchange. There are two payments to be made between the two countries. The New York man who has a payment to make,

makes that payment by the purchase of a trade bill in New York, and the one who sells the bill receives the amount which he desired to collect from England. In England, the one who has sold goods receives a draft from America in payment but actually collects from the one upon whom the draft was drawn. There is, consequently, no transfer of money between the two countries. The use of banker's bills is not particularly different. One who makes remittance by the use of one of these bills deposits money in New York, and the seller in England makes collection from the correspondent bank in London.

Those who draw upon their English customers may offer their drafts to traders who are desirous of buying, but they have the opportunity also of selling them to the banks, through the agency of which they are transmitted to London for collection.

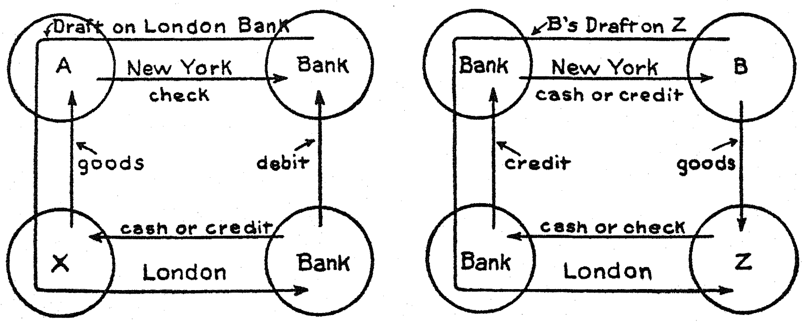


Figure 37: The banks and foreign exchange.

FOREIGN TRADE BILLS IN TRIANGULAR TRADE

In international transactions, bills of exchange very frequently pass through many hands, since, as in local trade, one bill may be used to make several payments. In foreign trade, there are many transactions involving three or more countries in which one instrument might serve as a means of settlement for all concerned. A situation in which a merchant in New York has imported woolens from London, another has sold machinery to be delivered in Brazil, and exporters in Brazil have sent coffee to London, affords a typical illustration of triangular trade. In this case, the Brazilian exporter draws a draft on his London customer. He sells it locally in order to collect the payment. It is taken by the

importer of machinery and sent to New York in settlement of his account. The exporter of machinery in New York, in order to make his collection, sells it to the merchant who had bought woolens from England. The importer sends it to London to meet his obligation there. The London exporter presents it for payment to the one who had bought coffee from Brazil and who makes the final settlement. The case would be much the same if London had exported cloth to Brazil, the latter had sent coffee to the United States, and the United States had sent cotton to England. There is simply a reversal of the importations and exportations. The American exporter would draw upon his London customer and sell the bill to the coffee importer, who would send it to London in payment for the cloth. In London, it would be presented to the importer of cotton, thus ringing out the entire set of transactions. The effect of the use of banker's bills would be the same in the end, though as stated before, it would involve a relation between two banks at each step rather than of importers and exporters alone, and some use would be made of the method of clearance.

The illustrations which we have used in the preceding paragraph are not in strict conformity to practice, though they help us to understand the nature of the transactions to which they relate. Foreign trade paper is seldom drawn for an amount to suit the needs of several traders, and some use is made of the banks in practically all cases.

THE RATE OF EXCHANGE

When bills are to be transferred from city to city within the United States, it is possible to quote the price of them simply by stating the amount of money indicated on the face of the bill with the premiums and discounts added or subtracted. In exchanges between two countries which have monetary systems that are not based upon the same unit of value, the credit instruments express obligations in the monetary language of one country only and yet need to be quoted in terms of the money of other countries. In Canada the unit of value is the same as in the United States. Therefore, a bill of exchange representing $100 in Canadian money, when at par, is worth $100 in the United States. Since the English sovereign, or unit of value, weighs 113.0015 grains of pure gold, a draft on London calling for the payment of one pound

sterling, when at par, is worth $4.8665 in American money. A franc, in normal times, has been worth $.1923 in American money, and if exchange were quoted directly and there were no discounts or premiums, a draft calling for payment of one hundred francs would be quoted in New York as worth $19.23. The mark, when redeemable in gold, is equivalent to $.2382 in American money. The foreign exchange market requires a similar computation and quotation whenever any two countries with different monetary systems are concerned.

These quotations are the "rate of exchange." They are the value, or price, of bills of exchange. When there are more collections to be made from London by the New York exporters than there are remittances to be made by importers, there will be a supply of bills greater than the demand requires. At such times, the banks may assist by taking up these extra bills and presenting them for collection through their correspondents in London. In so doing, they reduce the funds in their own reserves and increase the amount they have on deposit abroad. If the demand for bills were greater than the supply, the banks could relieve the situation by selling their own drafts on their London correspondents. In that way, they would accumulate funds at home and deplete their deposits abroad. Whether or not the banks will care to perform either the one service or the other depends upon the rates of interest in New York and London and the state of their reserves. The banks accumulate funds in the one place or the other as it is found most profitable to do. This has consequence also in the number of bills that are to appear in the market.

Whenever there is an oversupply of bills, it may be expected that they will be offered to purchasers at a discount, since those who have collections to make can afford to sell the bills at a slight reduction rather than to pay the cost of importing gold, which is the alternative. If there are many remittances to be made and an insufficient supply of bills available, the importers can afford to offer premiums to the banks in the purchase of bank drafts on London. Their alternative is to ship gold, and this involves a cost for packing, freight, insurance, and interest. As a matter of fact, the shipment of gold is made ordinarily by banks and not by individuals, and the supply of banker's bills is generally adequate to meet the needs of trade. The banks can afford to create bills whenever the state of the market permits a price high enough to enable them

to ship the gold to their correspondents to meet the payments made necessary by the sale of the bills. The bankers are willing also to buy any trade bills that are presented if they are permitted to take them at a price low enough to enable them to import gold from London to replenish their New York reserves. The rate of exchange varies normally, therefore, within the limits fixed by the cost of gold shipment. Exchange can go to a premium or discount only by about this much. The limits of this fluctuation are called the gold shipping points or simply the gold points.

THE RATE OF EXCHANGE AND MONETARY INFLATION

The rate of exchange when quoted in inflated currency is a much more variable and uncertain thing. If the value of the currency of any one country changes, a new ratio with the currency of every other country is established. In other words, there is a new par of exchange, and exchange may fluctuate up and down from this par by the amount necessary to make payments in gold itself. Thus, if London drafts were payable in English currency which was not redeemable in gold, the par of exchange might be $3.50 or any amount lower than $4.8665. The gold points would be above and below this new par of exchange. There are serious consequences, also, if there is no supply of gold in one or the other country with which the settlement of balances may be effected when the demand and supply of bills are not in equilibrium. Exporters to a country with no supply of gold are able to collect their accounts only when goods are being received from abroad in sufficient quantities to effect a balance. If few goods are coming and no gold is available, there will be an oversupply of drafts to be disposed of, and exporters will need to collect just whatever amount they may be able to get from them in their own country. Sellers may prefer to take much less for the drafts than their face value rather than to await the time when full payments may be made. Those who buy bills are willing to do so only in case the bills can be obtained at such a discount as will justify holding them until payment can be effected.

This latter situation is one which tends to correct itself. A country with practically no supply of gold available for shipment would be one in which prices in terms of gold would be comparatively low. There would be every incentive, therefore, to make

purchases in that country. The country which had the great gold supply would be one in which prices quoted in terms of gold would be relatively high. Exports from the latter country would tend to decline under such circumstances. Therefore, there would tend to be a reversal of the trade balance. The one which had had difficulty in making payments would send more goods; the one which had had difficulty in making collections would make fewer sales and have less to collect. So, in the course of time, the situation would adjust itself, and exchange would tend to come back to its original position. This would be strictly true only in normal times. Occasions may arise which permanently disturb the intercourse of nations with the result that equilibrium is reestablished only very slowly, if at all.

THE BALANCE OF PAYMENTS

It appears from the description of domestic and foreign exchange and exchange rates that the supply of and the demand for instruments for the making of payments depends upon the value of the goods received and shipped, or, as we say in foreign trade, imported and exported. Where importations and exportations are equal, the obligations of the traders are in exact balance, and no money payments are required. But the value of the tangible goods transferred in the course of trade is not the only factor having a part in determining the movement of money and the rate of exchange. There are many services to be paid for by means of credit instruments of the same sort in general as those used in settlement for goods. Thus, in international trade, insurance premiums, commissions for various services, such as selling, advertising, and warehousing, rendered as an aid to commerce, and the freight rates paid to ships and other carriers, all enter into the total of the payments to be made and are represented by some sort of commercial paper. The expenditures of governments in the maintenance of diplomatic and consular establishments in foreign countries and the expenditures of travelers abroad go to pay for both goods and services, though nothing so purchased enters into the list of importations. Possibly still more important are the investments made by citizens of one country in the productive enterprises of another. In the course of time following such investments, interest payments are to be made, and ultimately the principal of the

loan is to be repaid. The securities of corporations of foreign countries and many other evidences of ownership or debt appear as factors in the balancing of payments. We have taken note above also of the fact that the banks interested in foreign trade keep deposits abroad as a matter partly of investment and that they deposit funds with and withdraw them from their correspondents by means of drafts. The immigrants in America have been accustomed to send their savings back to Europe by the use of money orders. All these and many other items of payment are set off against each other in the process of clearance and have much to do with the amount of gold that must be shipped from one country to another in settlement of the final balance. It should be added that gold is exported as an ordinary commodity from countries producing more than they require for their own industrial and monetary purposes.

THE FOREIGN EXCHANGE MARKET

For the world as a whole, London has been the commercial metropolis, and through that city most international payments have been cleared. The European war disturbed the free market for gold and diverted much of the business formerly handled in London to New York and other secondary centers of trade. No one of these cities, however, has established itself as a central point of clearance for all foreign trade transactions.

In all the great seaports, there exist exchange markets similar to the local payment markets within the country. Here, foreign trade instruments are bought and sold by financial agents and concerns that have little or no other connection with the transactions out of which the instruments arise, as well as by traders themselves. The banks which maintain funds in London are merchants of this exchange market. In addition, there are many other dealers, including some brokers, whose sole function is to assist in the transfer of foreign bills. The result is an active free market for bills with the consequent adjustment of exchange rates in accurate conformity to the conditions governing trade and the balance of payments.

XIX

LOAN TRANSACTIONS

The negotiation of loans and negotiable instruments. Loans and discounts. Security in loan transactions. The lending of credit. Commercial bank loans and discounts. The use of banks in commercial loan transactions. Bank loans and discounts and the cash reserve. Total liability and resources. Rediscounting. The open market.

THE simpler transactions involving the use of credit are familiar to all, and on that account we have found it permissible to mention loans frequently in the preceding chapters without pausing to explain them. Now, we are to undertake the analysis of the second of the two most important phases of financial activity, namely, the lending of purchasing power, with the purpose of discovering upon what foundation credit ordinarily rests, how loans are negotiated, and what part the financial machinery of the market plays in loan transactions.

THE NEGOTIATION OF LOANS AND NEGOTIABLE INSTRUMENTS

The borrowing of the means of payment often necessitates consultation between the prospective borrower and the lender, and loans are generally the result of bargaining. Therefore, we speak of borrowing as the negotiation of a loan. Since in many, if not in most, instances, some paper is transferred from borrower to lender in acknowledgment of the debt created by the loan, notes and bills are said to be negotiated when transferred from one person to another as the result of some agreement. One who holds a note made by another or a draft drawn on someone else may dispose of the instrument by selling, or negotiating, it to anyone who may be willing to accept it, and, in so doing, the former is expected ordinarily to add his own signature to those already on the instrument. The transferor's signature is called an indorsement. In recent business practice, the intial transfer of a note or bill to the payee by the maker or drawer has almost ceased to be called a negotiation, though the law probably still so regards it. Both in law and in

business, only those instruments are held technically to be negotiable which are so phrased as to make them freely transferable to other than the original payee. Thus, the sum of money promised or ordered to be paid must be payable either to the *bearer* or to some designated payee "or order," rather than to the original payee alone.

These statements, taken together with the knowledge we have of the use made of credit instruments in effecting immediate payments, emphasize the probably patent facts that not every successful negotiation results in a loan and not every credit instrument used in the making of loans is a negotiable instrument. Checks and sight drafts are negotiated as are notes and date drafts, and yet the former involve no intentional deferred payment. On the other hand, many credit instruments, both notes and bills, which are entirely satisfactory for the purpose of acknowledging loans are not in technical conformity with the requirements for general negotiability. It is also obvious that some loans are made on the basis of oral promises. In fact, deferred payments for goods on open account with merchants may involve loans upon nothing but an implied promise to pay.

The negotiation of a promissory note or a time bill by the original payee to a new holder, or by this holder to another, results in the transfer of an existing loan from one lender to another rather than in the creation of new loan. From the standpoint of the buyer of the instrument, a loan has been granted for the remainder of the time the instrument is to run; so far as the seller is concerned, a loan has been brought to an end. The original obligor, of course, is undisturbed by all such transfers. These are negotiations which transfer the burden of loans and change one of the parties to each of the contracts so assigned and consequently are loan transactions, even though as such they create no new obligation to pay.

There is still another effect of the negotiation of credit instruments of which we must take account. It has been assumed in the paragraph above that the seller of a note or bill is simply the lender in a first transaction who sells for cash in a second transaction the paper he first received. However, he may himself be a borrower in the second transaction, and the effect of the negotiation to the third person involved then is to change the borrower in the second loan transaction as well as the lender in the first. If B

who holds the unmatured note of A becomes indebted to C and transfers the note in acknowledgment of this debt, two loan transactions are modified by the act. Not only is C substituted for B as lender in the one case, but A is substituted for B as borrower in the second. Furthermore, two loans are merged in one with the result that only one note and one final payment are required. The original delivery to the payee of a date draft drawn by one on another who is the debtor of the drawer is of very much the same effect as later negotiations of the instrument, since it involves the transfer of the burden of carrying the loan to a new payee. But if the drawer were to present the draft to his own creditor in acknowledgment of a debt, the result would be such a simplification of obligations as has just been described.

It is evident that we have returned at this point to the subject of the simplification of payments. Since there are no consequences of the transfer of commercial paper in loan transactions other than those that we have mentioned in this topic or in the preceding chapter, we turn from this added study of the use of credit instruments, which is something of a digression, to the study of the use of credit itself.

LOANS AND DISCOUNTS

Three expressions are used to designate the transactions which we have included within the meaning of the word "loan," namely, credit, loans, and discounts. The three expressions apply to transactions which are unlike in some particulars. The "extending of credit" is often the granting to a customer of the privilege of buying goods without immediate payment. The result is not a loan of goods, since if it were, the goods themselves would need to be returned. An agreement for the transfer and return of goods is called in legal terminology a bailment, and there is no popular expression that is exactly equivalent. When credit is given, on the other hand, payment is to be made in money or some negotiable credit instrument. Except when credit is extended for mere temporary convenience, interest is to be paid by the one favored or, what is of the same effect, the bill for the goods is advanced in an amount equivalent to interest, with provision, in some cases, for deductions or rebates for early settlement. In many instances notes are required in acknowledgment of the debt for goods purchased; but whether or not any paper is transfered or interest

charged, the effect of the extending of credit is the same as that of granting a loan.

In the language of business, "loans" are those credit transactions in which a sum of money or some other instrument of payment, rather than goods, is given by the lender to the borrower. A repayment is expected, and interest is charged for the service and accommodation to the borrower. The third of the phrases used is "discount." In banking practice, loans are distinguished from discounts upon the basis of the method of payment of the fee which is charged by the lender for the service to the borrower. This fee may be in the form either of a premium or a discount, calculated as a percentage of the principal sum. Thus, when one makes a note containing the promise that $100 will be paid in one year with interest at 6%, it may be provided that he may receive $100 in exchange for the note and pay back $106 at its maturity. Such a contract constitutes a loan. If, on the other hand, the note were to be discounted, he would receive that sum which at 6% would yield $100 at the end of the year, or $94.34. Since the process of discounting is simply the taking out of the interest in advance, the borrower receives less than $100 in the beginning and pays the exact amount of principal in the end.

There is no particular advantage in the use of one method of handling the loan rather than the other, since it is not much more difficult to compute the present worth of a note or bill than to calculate an interest premium. During the course of its existence, the instrument, in either case, is never worth the amount indicated on its face except at maturity, but is always worth either a certain amount less or more than the principal sum according to the method used in contracting the obligation. Nevertheless, lending by banks is very generally by the method of discounting, and their loans are given the name of discounts whether they are based upon notes of the customers or upon the purchase of negotiated notes or bills of exchange. Discounts of this sort are not to be confused with commercial discounts, which involve the payment by a customer of less than the face of a bill for goods.

SECURITY IN LOAN TRANSACTIONS

Not every business man has such credit that he can borrow upon the presentation of a note or bill. He must be able to offer some

security, or assurance, to the lender that repayment will be made. There must be at least some device of protection upon which the lender can depend.

The primary requisites of security are the willingness and ability of the borrower to pay. These two elements are fundamental. They are the basis upon which all credit rests, and all other security is taken by the lender as evidence of the existence of these or as a means of protection against contingencies which neither borrower nor lender can fully anticipate. Once there enters the least distrust of the intentions of the prospective borrower, confidence is so far destroyed that credit ceases to exist. The lender does not knowingly transfer to others funds to be recovered only by a suit at law, no matter how adequate the borrower's resources may be or what property has been pledged for payment. The procedure of collection from a defaulting borrower is burdensome and costly. If there is doubt of the borrower's ability, rather than willingness, to pay and no indisputable assurances can be given, exceptionally high rates must be charged to cover the risk of non-payment. If the doubt is too great, no security can be felt, and no loan is likely to be granted.

It follows that the best, and often the only necessary, security is a reputation for honesty and ability. Evidence of both of these is to be found in a record of prompt payments in the past. Further evidence of a person's ability is to be found, not only in the property he possesses and the income he is receiving, but also in his previous success in business undertakings. This latter is, in fact, the better evidence. Present holdings and present income afford no such assurance of future payments as does a proved ability to command the funds necessary for the settlement of debts at the time when obligations mature. Of course, it is not to be expected that the borrower will keep on hand the funds that he borrows, nor even the goods that he buys with the means put at his disposal. There would be no purpose in borrowing and no gain from the loan if this were commonly required. Neither is it necessary that the borrower have always in his possession as much in total value as that which he has borrowed. It is sufficient that he intends to pay and is able to command the necessary resources when settlement is due.

It is not always possible for honest and capable business men to offer perfect personal security. In many cases, the lender has no

way of acquainting himself with the quality of the credit generally accorded a prospective borrower. Loan transactions are not always between persons well known to each other, and many who are reasonably to be expected to make settlement without default have no such record of continuous borrowing as to establish publicly their proper credit rating. In such situations, some reliance is to be placed upon the evidence of the assets or property of the borrower, or in the excess of his assets over his liabilities. All these assets may be subject to seizure after the lender has had proper recourse to the courts. But this is not to be taken for granted. For more perfect security, therefore, the borrower may offer the lender a qualified or conditional right to certain of his property.

The pledging of property as security for a loan may be accomplished in any one of several ways. A legal instrument may be executed setting forth the pledge. This instrument is called a mortgage. There are chattel mortgages, affecting personal property, and mortgages of real estate. In other cases, the property itself may be delivered to the lender to be kept until the debt is paid. When ordinary commodities are given the lender for this purpose, the goods are said to be pawned. In most financial transactions, when security of this sort is used at all, stock or bonds or similar evidences of ownership or debt are deposited, and these are called collateral security. Mortgages and collateral are appropriate pledges to accompany a personal note or corporate bond.

Drafts also may be secured through the pledging of property, as for instance, by the attachment of bills of lading or warehouse receipts to the draft itself. The effect is similar to the mortgaging of goods, since the title to the goods in the hands of the railway or warehouse is withheld from the purchaser or other person upon whom the draft is drawn until the bill is either accepted or paid. A draft with documents of title attached is called a documented bill. Obviously, such bills may be used for immediate payments, as for instance, where an interval of time must elapse between the shipping of the goods and their receipt by the producer, as well as in loan transactions. When goods are shipped with the intention of collecting on delivery, a draft drawn on the purchaser with a bill of lading attached may be sent to his bank. He obtains the bill of lading and the goods after settling the draft.

Those who are unable, or find it inconvenient, to pledge property

as security have one further recourse. They may make use of the credit of others who are willing to join with them in assuming the obligation of repayment. The one who signs a note with the borrower as an aid to him in obtaining a loan is known as a surety and the note is two-name rather than single-name paper. The surety is required to pay if the debtor does not. The one who stands as security for the loan may sign a separate promise guaranteeing the borrower's ability to pay and is then known as guarantor. The guarantor is liable for the debt if the debtor is found unable to pay after proper legal procedure against the latter has been resorted to.

THE LENDING OF CREDIT

Those who accept the position of surety or guarantor in loan transactions may be said to be lending their credit. Since credit may be transferred in this way, it is possible for those who could not buy goods on their own credit, and who alone could not borrow funds, to have the privilege of using the credit of someone else who is in no position to make direct loans to them but who is willing to come to their assistance in negotiating other loans.

There are several ways in which one may make use of the credit of another. The lender of credit may simply allow his name to be used as reference as a means of establishing and supporting the credit of the borrower. This is an imperfect guaranty. The lender may execute a special instrument of guaranty as stated above. In the third place, he may act as surety by signing the note of the borrower. In another case, the borrower may negotiate an unmatured note or draft that he has received in the course of other affairs. His name is then added to the names already on the paper and he is in a position to have the instrument discounted by a bank or other lender. A fifth possibility is found in the willingness of one of established credit to make a note in favor of some borrower simply as an accommodation. The borrower may secure funds then by endorsing and negotiating the note, and if he pays his debt when it is due, the maker is himself in no need of redeeming the note. One lends credit in a similar way if he gives a borrower the right to draw on him, promising to the borrower, of course, that he will accept the draft and pay if necessary. If he is compelled to pay, the loan becomes a realized cash loan, but if the borrower

after negotiating the draft to some one else, prepares to settle the bill when due, the drawee will have loaned only his credit.

COMMERCIAL BANK LOANS AND DISCOUNTS

The customers of the bank are those who come to borrow. They may seek loans directly on their own paper or present for discount notes and bills received in any one of the many ways previously described. In making loans and discounts to these people, the bank may give them cash. In the great majority of transactions, the bank does not do this. The bank exists to lend credit as well as to effect, as any intermediary might, a transfer of funds from other lenders to other borrowers. Consequently, the bank simply gives the borrower its promise or allows him to draw upon it, thus enabling him to make payments to others who would not accept his direct promise or who are in no position to await a deferred payment.

The bank lends credit in the first place by giving its own notes to the borrower. A merchant who could not use his personal promissory note, receives upon borrowing at the bank, bank notes which will be accepted everywhere because of the bank's superior financial standing. However, not every bank can issue circulating notes. The dangers of permitting the use of such obligations by all financial concerns regardless of the control exercised over them compelled the government years ago to restrict the privilege to national banks by taxing out of existence all other notes. (At present the Federal Reserve banks have especial powers in the issuance of notes.) Furthermore, bank notes are now regarded as a part of the monetary system, and a loan of notes by a bank would be regarded as a cash loan rather than as an extension of credit. Such notes are of less importance in loan transactions than might be the case, also, because only the Federal Reserve banks are in the position to issue them at every demand for a loan, if indeed even they are in such position.

The banks lend credit, in the second place, by giving the borrower the right to draw upon the bank. This is the way in which loans are generally made. The bank receives the customer's paper and in exchange records a deposit on his bank account. In other words, the bank "creates a deposit." This permits the borrower to draw checks up to the amount so loaned in order to make pur-

chases or settlements with others with whom he deals. If this amount were instantly drawn out in cash, there would be no gain in creating the deposit except the convenience to the borrower of making payments by check. The transaction would amount to a loan of cash. The customers, however, are borrowing frequently in anticipation of the need of making payments, and they do not draw out the funds at once. Furthermore, when the check has been drawn, it may come back for redeposit by the one to whom payment was made. When such a situation develops, it is clear that the bank's credit has made it possible for the customer to make a payment without the use of money at all, or to postpone the final settlement in money in a way that would not have been permitted otherwise. The customer who could not use his own credit has made use of the bank's credit and has secured the privilege of a deferred payment, for which privilege he pays an item of interest to the bank.

THE USE OF BANKS IN COMMERCIAL LOAN TRANSACTIONS

The commercial bank deals very commonly with merchants, and we may make use of the practice of these merchants in describing the nature and possibilities of the ordinary use of the banks in loan transactions. The retailer may borrow at his own local bank. He gives his personal note to the bank and thus acquires the means of payment which he may send to the wholesaler with whom he deals. In this way, the retailer makes use of his credit at the bank, and the banker grants a loan by creating a deposit against which the retailer may draw checks. In a second case, the retailer may make use of his credit with the wholesaler from whom he buys without employing any credit instrument at all. The wholesaler keeps a record of such transactions on his own books for a period of time, and, at the end, the retailer pays by check or possibly by bank draft. In the meantime the retailer is borrower and the wholesaler is lender. But the wholesaler in this case may have made use of a bank by borrowing from it on his own personal note as the retailer was described as doing in the instance above. Indirectly, therefore, the wholesaler's bank would be extending credit to enable the retailer to buy. A third situation arises when the retailer pays the wholesaler by means of a promissory note. The wholesaler extends credit to the retailer again in this way. It is probable,

however, that the wholesaler will discount this note at his own bank. The bank takes the note, records the amount loaned to the wholesaler on his account at the bank and at the maturity of the note sends it to the retailer's bank for collection. In this instance, also, a bank has been the means of extending credit to a retailer. In still another instance, the wholesaler may draw a draft on the retailer. If the draft is for immediate payment, it results, of course, only in an indirect settlement. The retailer pays the bank that presents the draft for collection. But if the instrument is a time bill, the retailer signifies his acceptance, and the wholesaler can then discount the draft at his own bank. In this way, the bank relieves the wholesaler of the burden of the loan, and when the time comes for settlement, the retailer pays the discounting bank directly or settles through his own bank which has received the bill for collection. These are various ways in which the bank or banks with which buyer and seller have connections may assist them in loan transactions by assuming the burden of extending credit and collecting deferred payments.

BANK LOANS AND DISCOUNTS AND THE CASH RESERVE

Though the bank is engaged principally in lending its credit, it is not able to get along entirely without money. Its depositors and its customers both draw checks which are presented for payment in money. Generally, the bank will have had no difficulty in acquiring cash. Some of the original capital contributed by the first stockholders may have been in this form or in instruments that were converted into money. The deposits made by the patrons of the bank are often in cash, and such paper as is received may be converted into money when the bank's receipts exceed its outgo. It is possible for the bank to accumulate in its vaults as much of this money as it is not required to pay out at once in responding to demands for the withdrawal of deposits and in the payment of checks at the window.

In order that the bank may meet all demands at the window made by those who have claims against the bank—depositors withdrawing funds as they need cash for payments, including borrowers drawing on their accounts—some determination must be made of the amount of money which it is necessary to keep in reserve for this purpose. Experience shows that the claimants,

taken as a whole, require the payment of only a small percentage of their total claims at any one time. That is to say, only a small part of the balance recorded on the books in favor of the several depositors and customers is withdrawn in cash at a particular time. It is found, furthermore, that there are new cash deposits to offset withdrawals so that the balance of outgoing money is still smaller than the total of the claims to be paid.

The proper administration of a bank includes the maintenance of an adequate cash reserve (and that law generally specifies what percentage shall be kept) in order that the bank may meet its obligations without delay, thus protecting the credit of the bank and affording the service expected by its patrons. Let us suppose now that the bank acquires more cash than is demanded by present obligations. There is no object in allowing this cash to remain idle. Of course, the bank may lend the surplus money on hand to additional borrowers. The personal notes taken in exchange substitute for the cash in the assets of the bank without increasing its liabilities, and, since the notes bear interest, such transactions are profitable. However, the bank prefers to use its credit and it gains more by so doing. Unless its credit is entirely exhausted, the accumulated cash affords it an opportunity to extend its loans by the method of creating deposits. The bank may make new loans and create more nominal deposits until the total of the claims against the bank, including those of actual depositors and those of the borrowers who have been given nominal or created deposits, bears as great a ratio to total cash as is safely possible.

We are now in a position to understand how fully the bank may make use of its credit in given circumstances. If the bank were to lend cash only, it appears from what has been said above that it could lend all but a small fraction of that deposited. Let us suppose that experience shows that only 15% of the deposits is demanded in cash at any one time. This amount of cash must be kept as a reserve. If the depositors have turned in $300,000 in cash at first, $45,000 must be kept to meet the demands for money and $255,000 can be given out in loans. However, if the bank does not lend this cash directly, but keeps it all as a reserve, the total loans can be extended to the amount of $1,700,000 provided only that the credit of the bank is sufficient to sustain loans so great in amount. The borrowers all appear on the books as depositors who have had deposits created in their favor. They like-

wise withdraw only a fraction of their funds at one time, and they are also paying off their obligations to the bank and thus depositing funds, as other depositors do, to replace those withdrawn. The \$300,000 held in cash amounts to 15% of the total deposits for which the bank stands liable and should be sufficient to meet all the demands for money for circulation.

Let us represent the two situations just mentioned by a part of the bank's balance sheet. It is to be noted that the claims of depositors are listed as "deposits" under liabilities. In the beginning, the assets (which are called resources in the case of a bank), and the liabilities stood as follows:

Resources		Liabilities	
Cash	\$300,000	Deposits	\$300,000

In the first subsequent operation, when cash was loaned, a change in the account took place as follows:

Resources		Liabilities	
Cash	\$ 45,000	Deposits	\$300,000
Notes of customers	255,000		

In the second operation, by which the bank made use of its entire supply of cash as a reserve and loaned its credit instead of its cash, a change was effected in the account as follows:

Resources		Liabilities	
Cash	\$ 300,000	Original deposits	\$ 300,000
Notes of customers	1,700,000	Created deposits	1,700,000
Total	\$2,000,000	Total	\$2,000,000

As a matter of fact, the two classes of depositors would not be distinguished on the books, and all the assets would be held as a means of satisfying the claims of both. The item indicated as notes of customers would be recorded as loans and discounts. The notes and bills held by the bank would be constantly changing as some were paid off and canceled and others put in their place. If some were paid off rather than renewed, the payments might constitute real additions to the cash which the bank held, and the deposits on the liability side would contain a greater proportion of real as against created deposits.

The expanding of loans in the manner described, or at least to the extent suggested, probably could not be accomplished if the banks of the country were operated entirely independently. If there were no such system for the clearance of payments as is

now in use, the checks drawn by a borrower at any one bank would be cashed at the bank by those to whom the borrower made payments out of his newly acquired funds, except in those instances where the payee happened to be a depositor at the same bank. The bank under such circumstances would need to keep cash more nearly equal in amount to all the loans made than has been assumed to be necessary in the discussion above. But as it is, the payee in question deposits the check which he receives from the borrower at the same or some other bank, and the checks thus drawn and deposited at the several banks so nearly equal each other that they may be cleared with the use of very little money. The fact that banks are united in one financial system also helps to explain the lending of credit; for, as we shall see presently, the banks assist each other in maintaining reserves to meet the demand for money at the window.

TOTAL LIABILITY AND RESOURCES

The uninterrupted operation of a bank depends upon the adequacy of its cash reserve, but it would by no means signify that the bank was insolvent if it should not be able at some time to meet the demand of a depositor for cash. In fact, the bank desires to keep, and is warranted in keeping, the cash reserve as low as possible, since funds not needed, and therefore idle, are wasted in an economic sense. Nevertheless, the safety of the bank itself depends in part upon its ability at all times to meet its obligations. It loses standing, that is to say, it loses credit, if it gives promises to those who make deposits and to those for whom it creates deposits and is then unable to meet them when payment is due. The cash reserve is the bank's own protection; it is protection for the depositor also to the extent that it insures his ability to command his own resources when he so desires. The ultimate protection of the depositor, however, and for that matter, of the bank itself, lies in the total assets or resources. Very important among these, as we have seen, are the notes and bills of the customers upon which the bank has made its loans and discounts. They are an asset upon which the bank must realize if it is currently to replenish its reserve and meet the liability it has created in favor of the borrowers. If these notes and bills were to shrink by the failure of some of the borrowers to make payment, in part or in

full, the bank would need to draw upon some other resources, less promptly available than this is supposed to be, to make up the difference. The borrowers have drawn upon the bank for the amount of the loan; if they do not repay, other depositors may find themselves unable to withdraw their funds, at least for a time.

The essence of good banking is in making no loans except upon paper that will not shrink. Notes and bills are to be received only from persons whose personal credit is good. In addition, much of the paper is to be specially secured. Whether the loans are so secured or not, however, the bank has recourse to the property of the borrower for collection. Back of the resources of the bank, therefore, generally speaking, stands the personal property or the business capital of many business men whose own success depends upon their meeting these obligations without fail. This is the security which the holder of a bank note has, also, regardless of the special reserves that may be kept to insure the redemption of his note. As long as the various claimants against the bank are secured by assets in the form of cash and first-class commercial paper, they have adequate assurance of payments.

If this security alone were required, the bankers themselves would need to have no stake in the business. One might establish a bank whenever his own personal standing in the community was such as to make his credit useful to others. He might begin operations by lending his credit. In other words, he would create some deposits. He then could receive additional deposits as people came with notes, bills, and cash to be left with him. If pressed for payment in cash at a time when he had an inadequate supply, he could procure the required amount by borrowing it, since his credit would be good, or by selling some of his personal or banking assets. He would probably prefer to take some of the paper deposited with him and sell it to someone else for cash. It is entirely conceivable that banking could be conducted in this very way.

There are reasons, however, why people should not be allowed to enter hastily into banking and why the community should be provided with still greater security against the mistakes, poor judgment, and dishonesty of those who might solicit their deposits. Very generally, therefore, the law requires commercial banks, at least, to be incorporated. They are required to collect a considerable part of their authorized capital before they may begin

operations. This means that the stockholders of the bank are required to provide as capital a fund which will serve as security to all of those to whom the bank may become indebted. The capital may be used in part in the business in the form of cash to be kept in the reserve. Generally, it is invested in bonds, either government promises or others equally safe.

The stockholders are not likely to earn a very high rate of interest from the investment of the capital itself. Their dividends come from the earnings of the lending and discounting operations. It is the interest paid to the bank for the loans that is expected to pay the salaries of the officers, the operating expenses, and the compensation of the stockholders for the service and risk involved in the use of their credit. The capital is a part of their own personal property, in a sense, though not legally, which they have pledged as security to those from whom they have received deposits. It is the security for the loans thus made by the depositors to the bank. In addition, the bank may be required to accumulate a surplus before any dividends are paid to the stockholders. The surplus is the property of the bank as such, as is also the capital, and the stockholders have a claim to it in the same way that they have a claim to the remainder of the capital. It is additional security, however, to depositors. Upon the failure of the other resources of the bank, the depositors may draw upon this surplus and upon the capital itself.

There is still a third security over and above the capital and surplus, and the notes and bills and cash reserve. The stockholders of the bank, except in the case of certain state banks, are liable personally to an amount as great as the par value of the stock they hold. This is called double liability. If the bank's resources are inadequate to meet the claims of depositors, the stockholders themselves may be drawn upon for the settlement of the unpaid claims.

A simple bank statement will bring together the various items of liability and resources (except this personal liability):

Resources		Liabilities	
Bonds	$ 65,000	Capital Stock	$ 50,000
Real Estate	25,000	Surplus & Undivided Profits	40,000
Cash	185,000	Circulating Notes	10,000
Loans & Discounts	725,000	Deposits	900,000
Total	$1,000,000	Total	$1,000,000

This account differs from the actual account of a bank in that

some of the items which would offer complications have been omitted and the sums have been given in round numbers. The surplus and undivided profits, also, are not to be entered as a single item in actual practice. The statement does disclose, however, the essential features of the simpler phases of the bank's transactions. It will be noticed that in this case the total liabilities of the bank to others than the stockholders amount to $910,000. These are set over against assets of $1,000,000. There is a cash reserve to meet the claims of the depositors to the amount of more than 18%, part of which is no doubt on deposit with other banks and drawing interest. There is a surplus of security to the depositors to the amount of $90,000 in the assets of the bank and a liability of the stockholders to the amount of $50,000 more.

REDISCOUNTING

It is evident that there is a limit to the extent to which the bank may increase its liability. The amount of the bank's capital and surplus itself affords a limit. There is the necessity also of an adequate cash reserve, and this reserve depends largely upon the cash deposits which are made by the patrons of the bank. However, the needs of the community are not necessarily proportionate either to capital and surplus or to the deposits. The demand for loans, therefore, may be far in excess of the ability of the bank to lend. While it is not to be expected that this will be the case for long periods of time in any one community, it would be very difficult for all the banks of the country to maintain resources adequate to the fullest expansion of credit that might be needed without at some time keeping their resources wastefully idle.

When any bank has a surplus of funds, it is inclined to transfer the surplus to banks with which it corresponds in other cities where the funds can be put to the fullest use. An expansion of its loans may sometimes be made by the withdrawal of its deposits in other places as these come to be required to replenish the reserve at home which is to support the new loans. There is not often much point to the actual withdrawal of the deposits in other banks, since funds are so easily transferred by credit instruments satisfactory to any depositor that the entire cash reserve need not all be kept at home. But even with the use of these funds, there is a limit to the total that may be obtained in a time of especial de-

mand. Though the system of maintaining deposits in the great financial centers offers some flexibility to the bank's discounting operations, it is of very little use in a community where the financial resources are inadequate to requirements of borrowers.

It is possible for the local banks to meet this need if they themselves are able to borrow in other communities. This has frequently been done in the past. The bank could issue its own promise in order to borrow from banks with greater reserves. At the present time, the method in use is that of rediscounting. The notes of the bank's own customers may be transmitted to a Federal Reserve bank and upon the basis of these obligations, the Federal Reserve bank will make its loan to the local bank. In practical effect, the local bank transfers some of its own transactions to the Federal Reserve bank itself and brings to the aid of its own customers this second resource of credit. After rediscounting, the local bank is no longer carrying the loan which it originally created and is, therefore, free to turn its resources to the assistance of new borrowers. While this is the effect of the transaction, the actual procedure is simply the further negotiation of the customer's note or bill to the Federal Reserve bank, upon the basis of which instrument a loan is made to the local bank, thus giving it the means of accommodating other customers.

National banks and other member banks of the Federal Reserve system are required to keep reserves of a certain amount upon deposit with the Federal Reserve banks. In practice, they keep some of their surplus funds on deposit there. As a result, the Federal Reserve banks are able to draw upon the resources of many communities in order to aid those that are short of funds. There are other banks also which engage in rediscounting. A few state banks have been organized especially to carry on this business, and the commercial paper houses have a part in these transactions. The intermediate credit banks and the national credit corporations of the agricultural loan systems are intended primarily as agencies to rediscount the longer obligations in the hands of the banks extending loans to farmers.

THE OPEN MARKET

The borrowers and lenders do not deal so generally through commercial banks as our illustrations of loan transactions may

seem to suggest; and not all loans are of the personal character that we have generally assumed in the discussion preceding. We know that bonds and stocks are passed about as investments with the aid of investment houses or with the intermediation of no financial agency at all, and they come into the hands of people who have no considerable knowledge of the corporation issuing the securities. Ordinary credit instruments of all sorts may be so well secured that they may go far from home and be negotiated by people who have no acquaintance with the makers. This commercial paper is sometimes bought and sold in an open market with reliance upon some one or more signatures or the guaranty of the seller. The open market enables people who have extended credit and desire to be relieved of the burden to pass the obligation on to someone else. The process is much the same as rediscounting, but the transaction is different in a part of its procedure.

It will be recalled that certain financial concerns exist to conduct this exchange of paper. The Federal Reserve banks themselves are permitted to buy and sell in the open market. They may buy certain classes of obligations directly from those emitting the paper or from dealers who handle it. These purchases by the Federal Reserve banks are not loans of credit, and they are not recorded on the books as deposits. They require payment at once out of the resources of the bank. Transactions of this sort have the advantage, however, of permitting the banks to make use of funds not needed for ordinary discounting, and the banks make a profit upon these purchases and sales as a merchant would on goods. They are able to keep their resources busy and to accommodate a part of the market that would not present its requirements through the medium of a member bank. The volume of open market transactions is not large, of course, when compared to the business of the thousands of commercial banks.

Our study of credit and the borrowing and lending of funds is incomplete in that we have dealt almost entirely with individual loan transactions. The brief statement just given concerning the general market for commercial paper suggests that there may be much more to be said. The operations of the money market and the broader issues of economic causation in the use of credit and loanable funds are the subject matter of another chapter to follow immediately.

XX

THE MONEY MARKET

Elements of the money market. Divisions of the money market. The stock exchange. The bank rate and other money market rates. Causes of irregularity in the money market. Stabilizing and equalizing the money market. The currency and the money market. Credit expansion. Credit expansion and prices. The effects of credit expansion. Credit inflation. Cycles of business activity and financial panics.

THE money market is not coextensive with the field of finance, and its operations do not include everything that is done in the making of payments. Yet loan transactions have their effects in every phase of financial activity. In the first place, though the loan market is not directly concerned with the manager's administration of the income and outgo of his particular enterprise, it fixes, nevertheless, the rates of interest which in part control his decisions. Secondly, while the factors of the money market as such are not engaged in conducting the process of making immediate payments, interest rates, which are governed by demand and supply in the loan market, have an effect in determining the extent to which the use of credit will be preferred to immediate payment by purchasers who have an option in that matter. Instruments of immediate and those of deferred payments are so interwoven in the transactions of the money market that we shall find ourselves returning in this discussion that follows even to the subject of the currency and reaching the conclusion that a properly elastic currency is best provided through the agency of the lending institutions of the financial organization.

ELEMENTS OF THE MONEY MARKET

The commodity to be bought and sold in the money market, if it may be called a commodity, is loanable funds. The market prices, or rates, are governed by the demand and supply of available loans. Strictly speaking, the lenders are suppliers and the borrowers constitute the demand. However, at the points of its

greatest activity, the market appears to face about and to deal with the promises of the borrowers rather than with the funds of the lenders. It speaks of buying and selling commercial and other paper rather than of lending funds with this paper merely as evidence of the transaction. If loanable funds were treated as the commodity of the market, the borrower would be buyer and the lender, seller. In actual practice the lender is regarded as a buyer and the borrower as a seller of a credit instrument.

When we consider the money market as dealing in loanable funds, we speak of the rate of interest or discount as the price which the borrower must pay for the use of the lender's money or credit. In language very familiar to the dealers themselves, the price is the principal sum which the lender is willing to give for the borrower's paper. The lender is interested in making this sum as low as possible, for by so doing he increases the margin between what he lends and what he receives in return. He may then be said to receive a high rate of interest. The borrower, as seller of the instrument, desires to make the price as high as possible in order to decrease the margin between what he receives and that which he promises to pay.

A low margin constitutes a low rate whether interest is calculated as a premium or as a discount upon the face of the note or bill. If a borrower promises to pay \$100 plus \$6 interest and is able to sell his note for \$102, the actual interest rate is less than 6%. If a corporation issues a bond with a par value of \$1,000 and promises to pay interest at 6%, and upon selling the bond is forced to sell for less than \$1,000, it is in reality compelled to pay more than 6%. The prices of the money market, therefore, result often in interest rates quite different from the nominal rates expressed on the paper bought and sold.

DIVISIONS OF THE MONEY MARKET

The money market has its divisions and subdivisions as does the market for goods and services. Some of these divisions are due to geographical causes. It would be very difficult physically to concentrate all borrowing and lending in one central market. Other divisions are due to a specialization based upon the nature of the loans involved. At one extreme is the market for short loans, known as call loans, which are of very short duration and

are used especially by professional speculators who operate in very active markets. At the other extreme is the market for bonds and stocks where investments are made, some of which continue for many years. Between these extremes, there are markets adapted to the handling of loans of every intermediate type. The commercial banks of the smaller cities may concern themselves entirely with the needs of merchants and discount paper for periods of from 30 to 90 days. Banks in other localities may be interested in the needs of farmers and those who buy farm products for shipment to central markets. They may need to grant credit for the period extending from the planting of a crop until it is harvested. There are markets where the notes of manufacturers may be bought and sold by the agency of acceptance and discount houses and of brokers. By means of these transactions, the manufacturer procures working capital for longer periods than may be necessary in the case of merchants. There are the markets for bills of exchange to enter into foreign trade. Here are bought sight and time bills, both documented and clean, and trade bills and banker's bills, including credit instruments of great variety.

There is no absolute uniformity of rates among the several geographical divisions of the market, since there is no such stability of demand and supply as would be requisite to a perfect adjustment throughout the entire financial field. There are variations in rates also because of the differences that exist among the many classes of credit instruments. Loans of some kinds generally involve greater risk than others. The fact that interest is to be paid for a longer time on one instrument than another is a factor affecting the interest rate or the price. There are elements of cost in the negotiation of loans of certain kinds which are not encountered in the case of others. Rates vary also because of differences in the terms of individual contracts and because of risks and costs peculiar to particular loans.

The divisions of the market differ also in the extent to which the buyers and sellers of paper are the original parties to the instruments bought and sold. Most banks lend chiefly to depositors and rely upon their own resources of funds. Each bank thus constitutes a small direct discount market. There are markets also which are largely, if not entirely, rediscount markets. The lenders of these markets, whether banks or others, receive paper

which the borrowers hold at second hand and upon which the latter have no direct, but only an indorser's or guarantor's liability. There are markets of a somewhat different order in which those who sell have no particular responsibility for the instruments sold and in which those who buy are often represented by agents. The latter collectively constitute the open market. Stocks and bonds are bought and sold in such a market as this.

Through the discussions of the preceding chapters, we have become familiar with the organization and functions of the discount and rediscount markets, but we have only incidentally taken note of the existence of the great open market for loans and investments. In some of its own divisions this market is very highly organized. This is especially true of the market for corporate and governmental securities. Therefore, at least a brief description of the stock and bond exchange is necessary to complete our study of the financial organization.

THE STOCK EXCHANGE

While the position of the stockholder in corporate affairs is not that of a lender of funds, his contribution to the corporation is an investment, and the certificate of stock which represents his interest is transferable if not technically negotiable. The great majority of stockholders are very much inclined to regard themselves as investors only, and they give little attention to the management of the enterprises in which their funds are engaged. Some shareholders, of course, must concern themselves with the business policies of the corporation. They who hold the majority of the shares have the controlling interest and generally assume their entire burden and privilege. Thus they leave the minority shareholders, often the greatest number of individuals (since voting is by shares), without a voice in the management. The controlling interest is often much less in fact than a majority of the shares because of the disinclination of some shareholders to vote, because of their willingness to give a "proxy" to the one already in control, and because of the lack of unity and organization in the opposition to the faction in power. The ordinary shareholder is in fact very much an outsider and buys and sells stock on the prospect of dividends alone. We are justified, therefore, in including stock transfers in the operations of the money market,

even though occasionally the control of some corporation is the matter at stake in these transfers.

In certain of the large cities of the country there are associations of dealers in stocks and bonds who maintain a market place where corporate securities may be freely offered for sale and where purchases can be made as in any commodity market. The result is that in the stock and bond market there exists a situation more closely conforming to the market idea as it is generally held by the public than anywhere else in the financial field. Among these various markets, that of New York City is by far the most important. The stock exchange is an association of brokers and others who are interested in the purchase and sale of securities. The exchange is organized much as any other association would be. It has a membership limited to 1,100. It owns a building where the members may meet for the conduct of business. The sessions occur daily from 10 o'clock a. m. until 3 o'clock p. m. There is a chairman in charge of the organization and a governing committee which has control of the conduct of the association's affairs. A membership committee passes upon the qualifications of those who apply for admission and consents to the admission only of those whose financial standing is approved and whose reputations and records are in all particulars satisfactory. While the initiation fee and the annual fees are not burdensome, the advantages of membership are so great that one may secure a place only by purchasing the seat of someone already a member. The exchange permits dealing only in such securities as have been examined by its committee on the stock list. Before securities are listed, the corporation's accounts are examined and all possible evidence taken upon which a reliable judgment can be formed as to the soundness of the enterprise to which the securities pertain.

Among the members of the exchange are capitalists who may be interested in buying bonds and stocks as investments. There are brokers engaged in buying and selling for those who place orders with them. The brokers may be agents of other members or may represent outside interests altogether. There are also room traders who buy and sell for their own purposes. They are generally speculators interested in the changing prices of securities. Among them are the scalpers who make their profits from very slight changes in the prices of stocks. We shall have occasion to refer to these speculators later in another connection.

Securities are bought and sold by brokers and other dealers in blocks of 100 shares. Demand and supply are so nicely adjusted at times and the market so active that prices vary by as little as one-tenth of a point—a point being 1% of par, or $1.

In placing orders for the purchase of stock with a broker, one deposits a margin which is at least nominally an advance installment required to protect the broker from any loss on the stock which might occur through a decline in its price if the purchaser should fail to complete the purchase and make the final payment. When one has made a purchase, he may desire to sell again shortly. If the price has gone down, the margin which the broker holds will be taken to the extent necessary to cover the difference in the purchase price and the selling price.

The transactions of the stock exchange are conducted to some extent with the use of borrowed funds. The funds to be used as margins may be borrowed. The loans made to the broker himself, however, are much more important. They are necessary to enable him to buy and carry stock without having received full payment in advance from some purchaser. The brokers, therefore, borrow from the banks of the financial district. The banks are represented in the stock exchange itself and make their loans through agents who are known in the exchange as the "money crowd." Because purchases and sales are quickly consummated, these loans run for a very short time and are known as call loans. The banks may call, or require the repayment of, the loan after a day.

Presumably, the members of the exchange are experts in market conditions and so advise their clients that purchases and sales reflect accurately the prospect for earnings in the various corporations concerned. The prices are supposed to disclose, not simply the condition of the corporation itself, but also the market for its product. So much reliance was once placed in the stock market quotations that they were regarded as a barometer of business conditions. As the prices of stocks rose and fell, it was thought one could discover the trend of business activity and govern his own operations accordingly. There are now other devices for determining this matter, and the sources of information once supposedly only open to these experts are now available to all. Furthermore, the traders in the stock market are anxious to control prices in order to increase their own profits,

and if one side of the market has the advantage of superior knowledge for a time or succeeds in manipulating the prices of important securities, there is, of course, no true correspondence between the state of the market and the actual conditions of the country. It is well known also that these markets are subject to panic and are often too greatly influenced by political changes and extraordinary occurrences which are causes of less consequence than the market seems to suppose, as shown even by its own reversals of position. There is significance, therefore, only in the long swings of stock and bond prices, and it is necessary to disregard the flurries of a market all too sensitive to minor disturbances which may affect a dealer's profits without greatly changing corporate earnings.

The market is affected also by the "lambs," who are outsiders allured by the real or fictitious gains of the stock speculators or of other lambs and who hope to gain riches suddenly by a few brilliant transactions on the exchange. These amateur speculators are a disturbing influence whether they win or lose. It is needless to say that it is only by an occasional chance that these uninformed and inexpert speculators are able to succeed. They are known as lambs because of their innocence (in other than a moral sense) and the ease with which they are fleeced.

THE BANK RATE AND OTHER MONEY MARKET RATES

The importance of the stock market in its relation to the money market in general lies in the effect which the changing prices of securities have upon the demand for and the supply of loanable funds in other forms. The supply of loans in the investment, or long-term paper, market is dependent upon rates, not only in that market, but also in the short-term loan and discount markets. Corporations ordinarily do not issue bonds at times when the only contract that can be made with investors is at high interest rates. They arrange instead for loans on corporate notes maturing possibly in two or three years, or they borrow at the bank for a time. The result is that presently those who have funds for long-term investment find fewer borrowers in the market and must be content with lower interest. Meanwhile, increased borrowing has caused a rise in the rates on short-term obligations and probably in the discount rate at the banks. Other borrowers than

corporations have the disposition to place their paper in the most favorable market and to adjust the terms of the loans they expect to negotiate to the requirements of the lenders there. It may be said, parenthetically, that the banks themselves invest some of their funds in the securities of corporations as well as in the paper they ordinarily buy. This also serves to bring the market rates on various classes of paper into harmony. The outcome of all these interacting transactions is that the rates of the money market are brought into such adjustment that the differences reflect fairly satisfactorily only the real merits of the various types of loans.

CAUSES OF IRREGULARITY IN THE MONEY MARKET

If the rates upon loans were left entirely to unregulated development, there would be every possibility of extreme fluctuations from time to time and the probability of inequality of rates in different regions. The various parts of the market are affected by causes making for equalization and adjustment, as we have just seen, but it does not follow that rates attain all that is to be desired in the way of stability as a result of natural causes alone. The financial organization has devised means, therefore, of stabilizing and equalizing the market.

We may consider briefly, at the risk of some repetition, the causes of some of the variations in interest rates which it may be economically desirable to eliminate because of the resulting hindrance to production or to the regular operation of the market. There are regions in which the land is newly occupied, where cities are making a rapid increase in population, where the conditions affecting the prosperity of the local industries are less clearly understood by the investing public generally than in older regions, and where the enterprises have not been so long established as to afford investors at a distance satisfactory assurance of continuing success. In the United States there are districts of sparse population and limited labor supply, of erratic climate, and of great instability in productivity from still other causes. Conservative investors hesitate to turn their loans in these directions, and those of speculative bent find no such promise of exceptional return as is generally necessary to attract their attention. In regions of very great promise it has been necessary, even in

times of peace, to pay as much as 12% for loans for agricultural development. This has been true in states of the very highest per capita wealth and of successful farm enterprises. These states are comparatively remote from the centers where funds are accumulated and have been unable to compete for loans against the investments with which the public is more familiar.

Interest rates are affected also by the increase and decrease in the demand for loans which is due to seasonal variations in the number of payments to be made. We have mentioned harvest time in agricultural states as a time when short-term loans may be in great demand. Planting time is a period when loans of longer duration may be required. The short-term loans in the autumn are needed to make payment to the farmer. The longer loans in the spring are demanded by the farmers themselves as a means of procuring equipment for the season's productive operations. In most manufacturing industries, as well as in agriculture and the marketing of agricultural products, there are "peak" seasons when more money is required than at other times and when loans are in greater demand. Banks which serve these particular industries have not always been able to meet the need, with the result that in these seasons interest rates have advanced. Even in retailing there are peak seasons, such as Christmas, or a time in the spring or the fall, according to the character of the merchandise handled, when more funds are required than at other times. Finally, there are occasional emergencies and times of stress when the need of financial assistance is beyond all expectation and beyond the possibility of anticipation. These are not simply periods of payment but times when loans must be granted to enable people to reestablish themselves and prepare to maintain their incomes in order that losses may be avoided or finally cleared away.

STABILIZING AND EQUALIZING THE MONEY MARKET

In all such situations, it is just as desirable that bank reserves be available of sufficient size to enable the banks to accommodate those demanding loans as in times of less activity or less pressing need. Yet it is very difficult for banks depending upon their own or other local resources to adjust their reserves economically to great variations in financial activity. There is an advantage

in a system, therefore, which permits and provides for the mobilization of the surplus funds of the country where the demand for them is greatest. Formerly, the reserves of the entire country gravitated so persistently toward New York City that it was difficult to place them where needs developed suddenly, and there was no especial method of distributing them even where persistent needs appeared. When surpluses accumulated in the New York banks, they were made available to foreign trade and could be put to the use of the stock market traders but could not be drawn off into regions not financially developed and where investments took such forms as would not interest great financial institutions. The Federal Reserve system has largely corrected this situation.

The banks in New York, Chicago, and St. Louis were required under the old law to maintain a lawful money reserve of 25% of their deposits. These cities were called central reserve cities. In certain other large cities known as reserve cities, the banks were expected to keep a reserve of 25% but could deposit half of it in the banks of the central reserve cities. In other places, banks kept a reserve of 15% but could deposit three-fifths of it in the banks of the reserve and central reserve cities. There was a method, therefore, by which the surpluses of small places could be taken to the centers of greatest financial activity, but no method by which the funds of the local banks could be replenished out of this reserve beyond their original deposit there, except as they might be able to negotiate a loan as any customer of a bank would do. Now, under the Federal Reserve system, the Federal Reserve banks hold the central reserves, and the national banks must keep their entire legal reserves on deposit there, retaining only the small sums for cash payments which our recent experience shows to be sufficient in all but extraordinary circumstances. These sums are called till money. Member banks in central reserve cities, now New York and Chicago only, maintain a reserve of 13% of their demand deposits, those in the reserve cities, 10%, and all others 7%. In addition, they maintain a reserve of 3% against time deposits. The Federal Reserve banks themselves maintain a cash reserve of 35% against deposits, with an additional 40% against the circulating notes.

The whole effect of this method of handling reserves is to create a great central source of funds upon which the member

banks can draw when the needs of their communities exceed the local supply of funds. They make use of the central supply by rediscounting the credit instruments of their own customers. The Federal Reserve banks are located in the districts they are expected to serve and are in a position to study local needs and ascertain accurately the repayment possibilities of the various types of borrowers. The adjustment of funds to local needs is thus accomplished in the first place by retaining the surpluses of each district as near its source as possible and permitting its redistribution within the district. But the system goes further than this. It is possible for any one Federal Reserve bank to draw upon others by the rediscounting process, and by the means of open market transactions it can draw upon the general supply of the money market. It is possible, therefore, for funds accumulated in any one part of the country to be taken into any other part, and there is little likelihood of the concentration of funds in regions where the lesser demand exists. As a result, interest rates throughout the country are more uniform than formerly and are as nearly uniform, probably, as they may be made through the agency of financial machinery. The seasonal and other temporary fluctuations of rates are now largely if not entirely eliminated.

THE CURRENCY AND THE MONEY MARKET

When the demand for credit is the expression of a need for more of the medium of exchange, the Federal Reserve banks may issue their notes, with the nature of which we are already familiar, and put them into circulation through the agency of the banks which have presented notes and bills for rediscount. The Federal Reserve bank in this case, instead of creating a deposit in favor of the local bank, sends it the amount of the loan in paper. The local bank is thus able to meet the demands of its customers for cash without having increased the accumulation in its vaults of the money locally in circulation. From the standpoint of the Federal Reserve bank, this is as satisfactory as lending credit except that the bank is required to keep a larger cash reserve when notes are issued and must keep this reserve in gold.

The security back of the Federal Reserve notes is of the same character as that back of any bank's obligations to pay; but it

is much more ample. In the first place, only certain selected credit instruments are eligible for rediscount, and an amount of this paper in excess of the notes issued must be kept in the assets of the Federal Reserve bank as an especial protection to the circulating notes. In the second place, the gold reserve is a guaranty of payment not given ordinary obligations. In addition to this, the notes are secured by the other assets of the bank itself. Whenever the paper upon which the notes are issued matures, some of the notes must be withdrawn or equally good paper substituted for the old. If neither of these is immediately possible, there must be a deposit of gold equal to the paper withdrawn. There is, therefore, every incentive and even necessity for withdrawing the Federal Reserve notes when they are no longer needed in the currency, and in order that this may be done, they are returned to the issuing bank whenever they come into the hands of any other Federal Reserve bank.

It is through the method of issuing and redeeming Federal Reserve notes that the quality of elasticity is given them. They are the only element of the currency having this quality, and we may pause to emphasize the possibility of increasing and decreasing their quantity in response to the needs of the market by contrasting them again with other notes used as money. The number of United States notes is definitely fixed and bears no relation at all to the number of financial transactions. National bank notes cannot be issued until the bank has purchased a certain amount of government bonds, and no more can be issued than the capital of the bank itself. The bonds must be deposited with the Treasurer of the United States, together with a 5% gold redemption fund. The procedure itself is very cumbersome and slow. It responds in no way to the need of the community and it is limited by the possibility of buying government bonds and by an arbitrary restriction of the amount. No especial provision is made for any withdrawals of national bank notes as a measure of adjusting their quantity to the need for currency.

Through the Federal Reserve notes, the loan transactions of the country become an effective regulator of the monetary system. It is true, of course, that all credit instruments are used as a medium of exchange and that checks are instruments of very great utility in the making of payments. The granting of loans by local banks, of course, permits the drawing of additional

checks and thus regulates to some extent the medium of exchange. These instruments circulate within a very limited range, however, and if they were the only possible response to the demand for loans when cash was scarce, there would be no way by which the country could satisfy its needs for a greater amount of authorized currency. Money would be issued, then, only when the government took occasion to use it in procuring enforced loans from the people or when the banks happened to have the possibility of buying more bonds. There would remain, of course, the device of the free coinage of gold, but there is slight chance that the temporary needs of a circulating medium could be met by the taking of gold to the mint.

The principle underlying the issue of the Federal Reserve notes is that the banks themselves should be allowed to create currency as the demand for it is expressed by a call for loans and an attempt to realize upon these loans by the withdrawal of cash from the bank. The loans are an expression of a need for the means of making payment as well as the need for the deferment of payment by the borrower. The accommodation of deferment which is granted the borrower may be accompanied at the same time by the means of immediate settlement with those with whom he deals. Rather than to leave this power entirely with many local banks where it is not necessary that it exist, it is given to a few well established public banks which are at the service of all the members of the Federal Reserve system.

CREDIT EXPANSION

So far, we have emphasized the necessity for, and the procedure used in, the distribution of the resources of credit in order that they may be made available in the greatest quantity at the points of greatest need. The stabilization and equalization of interest rates calls also for the expansion of loans in the aggregate and for their contraction with changes in business conditions. We must review in this connection the circumstances which determine the possibilities of credit expansion, and inquire into the probable effects of such a development in the money market upon other phases of economic activity.

An increase in the supply of funds available for investment results naturally from the act of saving by consumers. To the ex-

tent that his income exceeds his immediate needs, the consumer is willing to forego its use for a time and to lend a part of it to those who require borrowed capital for productive operations. The latter are expected to repay, of course, by setting aside a part of their own incomes for that purpose. In some cases also, the surplus returns from a business undertaking may be made available for lending to others. Great productive activity with favorable results yields great incomes out of which savings and investments may be made with ease. An expansion in loans is a possibility, therefore, in times of great productivity because of the attendant increase of means upon which in part the money market depends.

However, we have seen that banks, and other lenders also, may create loanable funds by putting their credit at the disposal of borrowers, thus enabling the latter to acquire stock in trade or capital for other purposes without previous saving—though, presumably, on the prospect of later saving for repayment. All bank loans, of course, must be paid off out of the borrower's income in the course of time, as must loans made by any investor. Though the loans may be extended, they are not allowed to accumulate indefinitely. But those who lend credit are not so limited as are those who lend previous savings. The latter are restricted by the amount of past income actually set aside for investment. The lender of credit, aside from the fact that his own rating may not permit indefinite expansion, is limited only by the prospect of future income to, and savings out of it by, the borrower. Loans may be made unwisely by lenders of either sort, but undue expansion is probably possible only to the banks which are lenders of credit with great resources.

Some restriction upon expansion is found in the practical requirement of cash reserves. On the other hand, an accumulation of money in the vaults of the banks as the result of its deposit by the public is a resource upon which an expansion of loans could be based if the deposit of the money were not itself an indication of market inactivity and a decline in the need for funds.

CREDIT EXPANSION AND PRICES

The primary effect of a general expansion of credit is to enable production to expand and develop, with the result that greater

supplies of goods appear in the market. These goods may be sold either at previous prices or at higher or lower prices as circumstances may permit. If there is a very great increase in the supply of goods without a corresponding increase in demand, prices are almost certain to decline; and if loanable funds are plentiful, interest rates should be low enough to enable producers to reduce their costs and to sell at lower prices. But some hold to the belief that every expansion of credit increases prices and was a cause, for example, of the extremely high prices of the year 1920. This is an idea very much like the supposition that credit instruments circulating as money are the cause of price changes. We are not concerned at this point with the results of the expansion of credit in increasing the currency, though under the Federal Reserve system that may be an incident of the expansion. The increase of the currency has had sufficient attention. The question is whether or not an increase in the supply of loanable funds or a greater extension of credit to borrowers directly affects prices, and if so, what the effects may be.

Whether or not a simple expansion of credit is even accompanied by a general increase of prices depends upon the causes which bring it about and the circumstances attending it. If the consumer had developed an increased demand for goods which his income would not permit him to buy, the granting of credit to him would enable him to make his demand effective in the market, and this demand would tend to cause an advance in prices. Thus, an expansion of credit, though not the primary cause of the increase, would be the result of the same cause and a necessary accompaniment of the change in prices.

But credit is only rarely extended to the consumer. Only when he borrows to build a house or buy some such durable good as an automobile does he receive a loan which substantially increases his expressed demand for goods. Credit is extended generally to producers, to such business managers as farmers, manufacturers, wholesalers, and retailers. They only are in a position to put the funds to such use that the latter will produce the means for the repayment of the loans. The expansion of credit has its effect, therefore, principally in the increase of the supply of goods. A general expansion of credit has a tendency, normally, to enable merchants to lay in larger stocks, wholesalers to bring greater supplies to the market, and farmers, manufacturers, and others to

enlarge their outputs. The use of this credit does not directly increase the ultimate demand for goods and services created by productive enterprises, nor does the simple fact that more is being produced increase that demand. While the producers may foresee a better market for their goods, the direct effect of the credit expansion is to aid them in the creation of supplies.

The producers, of course, buy materials and stocks of goods from each other to some extent, and in so far as loans permit the increase of demand on the part of the borrowing producers, the markets for the raw materials purchased incline to higher prices. But these materials are also being increased in supply and advances in price soon come to an end in any case unless there has been an increase of demand on the part of the ultimate consumer. The producers collectively are sellers to the consumer, and prices in the market as a whole depend fundamentally on the consumer's demand. Loans are an aid to the producer in taking advantage of circumstances that are favorable to high prices, but loans to producers cannot directly create and sustain the demand of the consumers upon which prices depend. Furthermore, loans to producers cannot so stimulate the demand of the producer himself for the goods to be produced that he becomes the cause of increased prices to himself, for his greater purchasing power as a consumer is to result from his sales at higher prices, and that power cannot be both result and cause at the same time.

THE EFFECTS OF CREDIT EXPANSION

The immediate effect of the expansion of credit may be one of the following:

1. There may be the result of an increase of supplies to be sold at lower prices because of the relation of the larger supply to unchanging or declining demand.

2. Producers may be enabled to expand production to keep pace with a growing demand. In this case prices may be no higher than previously if the producers, by the use of credit, succeed in adequately increasing their supplies. But if there is failure properly to expand credit or for any other reason productive output falls short of the need, prices will be higher. If the market is oversupplied, prices will necessarily be lower.

3. The use of credit may make possible an increase of sales by individual producers by enabling the producers to extend their selling efforts, as for instance, by enlarging the sales force or undertaking more extensive advertising. If these efforts are successful, sales may be made either at previous prices at somewhat lower profit per unit of goods due to the added cost, at previous prices or even at lower prices with greater profit because of a new ratio of output to fixed charges, or at higher prices with greater profit to the seller if the state of the market permits. These possibilities are hardly open to the productive organization as a whole unless there are forces operating to cause a general increase of demand.

4. If prices are rising because of changes in the market for the standard of value (i. e. gold), an expansion of credit will permit producers to take advantage of the situation. Their efforts to do so by producing and offering more goods for sale will have the effect of counteracting to some extent the tendency toward rising prices.

5. In so far as the producer's purchase of raw materials and services affects the personal incomes of those from whom he buys, the effect of his increase of market supplies may be partially counteracted, and prices may decline less than they might otherwise do.

The use of credit is thus only indirectly a cause affecting prices, and it is not invariably accompanied by the same developments in the market and prices. Generally, we accomplish most in the interpretation of prices by examining the state of the demand and supply of goods and services themselves rather than by observing especially the transactions and rates of the loan market. In all probability, the long established law of price stated in earlier chapters is correct, and adequate to the explanation of any immediate price situation. Their remains, however, one further possible relation of credit to demand and supply.

CREDIT INFLATION

It seems reasonable to suppose that credit would seldom or never be expanded beyond the needs of the productive organization. Ordinarily, producers borrow only when they see the

possibility of increasing output at a time of favorable prices and when they may increase their sales with resulting profit. Their demand for funds looks forward to the outcome of their productive activities. When business is properly managed, credit is employed only when there is use for it, for the borrower does not care to pay interest on loans with which to purchase stores of goods or enlarge his scale of production unless there is a demand for goods which will insure returns to cover the interest cost. Managers of sound business may be expected to know when they have capital enough. Storekeepers may be expected not to overstock with merchandise which cannot be sold, even though there be the possibility of borrowing to purchase these stocks at very low interest rates. In fact, only when the expansion of credit results from the producer's needs for more capital to meet a growing demand or to increase the efficiency of production does it serve an economic purpose.

But when loans are made to those who expect a demand that is not to materialize or who are incapable of putting the funds to productive use, credit is improperly extended, and the security for the loan is inadequate. Such transactions result in no increase of income out of which loans may be repaid. Credit extended under such circumstances is inflated credit. It is an unwarranted extension of the privilege of buying without immediate payment, or the granting of loans beyond the prospect of repayment. When few loans are to be made, it is likely that great care will be used. When funds are plentiful and credit is being generally expanded, both lenders and borrowers often become careless and allow an unsubstantial element to enter into their transactions. In periods of seeming prosperity when present incomes appear to be entirely sufficient to the repayment of loans, people become less cautious and lend and borrow upon the promise of future income though there is no proper assurance of its realization. No record of the producer's past earnings is sufficient to justify a great expansion of credit, and the prospect of an improving market is very difficult to measure. Inflation may be the result, therefore, of the failure of borrower and lender to calculate independently and accurately the trend of market demand, which is a very important element of security in loan transactions.

Inflation is sometimes partly the result of the very notion that credit itself is the cause of high prices. Some lenders reason that

if credit is given, prices will rise, and those who borrow, therefore, may buy and sell at a profit. The expanded credit does make for activity on one side of the market, as we have seen, with a possibility of profits to producers provided demands keep pace with, or outrun, supply. But the increase of supply which results from the expansion of credit is a cause of losses and ultimate decrease of activity and prices unless the other side of the market is in a position to demand and does actually demand more goods.

CYCLES OF BUSINESS ACTIVITY AND FINANCIAL PANICS

The speculative borrower is one who is looking forward to increased sales and greater profits. When demand is actually increasing, some producers and bankers are so taken with optimism that they become, respectively, unwise speculators and inflators of credit. The unsound borrower overloads the market with goods. This is the oversupply of which we spoke in connection with industrial crises. This causes a drop in prices that otherwise might have continued stable or have continued to increase gradually. The consequence is loss and even complete failure to many who previously were on a comparatively sound footing. The speculative borrower, being unable to meet his obligations, involves other producers to whom he was in debt. The latter, failing to make their collections, are in turn faced with losses and failure and are unable to meet their notes at the banks at maturity. The banks find that the notes and bills they hold are shrinking in value. They are confronted with losses and are not able to meet requests for renewals and additional loans. They are in no position to help those whose business operations have generally been sound but who are faced with a serious need in this emergency. Some banks find their resources so low that they are unable to maintain their cash reserves and cannot pay depositors who present checks to be cashed. Such a bank is technically insolvent and must close its doors. If payments can no longer be made through the banks, it is impossible to use checks in trade, and there develops a shortage in the medium of exchange. People hasten to withdraw all funds from the banks still open, and they convert all their resources into cash as rapidly as possible, often hoarding money against a later need. At this point, the financial machin-

ery of the country stops, and it is no longer possible to conduct trade for lack of the means of making payment.

The resulting financial situation is properly called a financial panic, and it is accompanied generally by an industrial crisis. Unfortunately, there is a tendency for these conditions of over-extended activity to occur at frequent intervals, and in the past there seem to have been regular cycles in which production passed from expansion to contraction and from great activity to depression. If the demand of the consumers had always justified and kept pace with the increase of supply in periods of expansion, the expansion might have continued indefinitely with beneficial results to everyone. Generally, however, very foolish investments were made, unwise production was undertaken, and merchants overstocked their stores with goods. The consumers, who could have purchased all that was produced for their actual needs, were in no position to take any and everything that speculative merchants and producers undertook to sell. Then, the speculators failed. A period of depression followed. This was a period of inactivity with the result of an undersupply of goods in the course of time. The demand of the consumers then outran the supply. There followed a period of rising prices. Credit expanded again to enable producers to meet the demand. Presently, the market was again oversupplied with goods, prices fell, depression followed, and disaster again concluded the cycle.

Our experience with financial panics reveals how much disorder may be occasioned by the unwise use of credit and by the misuse or improper functioning of the financial machinery of the market. Stringency in the money market and stagnation in trade have occurred when conditions were fundamentally sound, because of some extensive unwise expansion of production which was made possible by the inflation of credit. Panics may be avoided if private financial management is expertly and sanely conducted, if the banks exercise a wisely restraining influence upon the demand for credit, and if the banks are in a position in time of difficulty to support with loans those whose enterprises are substantial and financially sound. Many are of the belief that with our present regulation of banking, with the greater mobilization of credit now possible through the Federal Reserve system in times of danger, and with a better understanding of financial matters on the part of managers generally, serious panics are a thing of the past. This

is the more likely to be true if all come to see that there is nothing mysterious in the nature of money and credit. They are an aid to, but not the dominating force in, our economic activity.

ECONOMICS

PRINCIPLES AND INTERPRETATION

PART VI

COMMERCE

XXI

THE COMMERCIAL ORGANIZATION

Marketing. Sales management. The management of purchasing. Functions of the commercial organization. Specialization within the commercial organization. Middlemen of the initial market. The retailer. Middlemen of the wholesale market. The transportation system. The warehouse. Auxiliary agencies of the market. Trade associations. The commodity exchange. The commercial system. Cooperative marketing.

THAT which we have called trade in its particular aspects is properly called commerce when viewed as an activity of all the people. Commerce is the organized and continuous trade of the entire market and involves something more than occasional exchanges of goods. It is economic intercourse in its most extensive phase. The relations involved in the internal activities of a productive unit, such as the relations between one partner and another, a principal and his agent, or an employer and his employees, are very restricted in scope; but commerce is the means of bringing into touch with each other producers and consumers of every part of the country and of every language and nation. The payments which are made as a consequence of the transfer of goods become very impersonal in character upon passing beyond the boundaries of one community; but the transactions of trade itself carry geographical and personal names and producer's trade-marks to every part of the market and cause peoples to be widely known for the character of the goods they sell and the faith with which their contracts are performed.

It will not be possible for us to enter at this time further into the broader social consequences of commerce. The subject is an important one, but one that must yield for the present to a study of the very nature and place of trade in economic life. We shall confine ourselves in this chapter, therefore, to the description of the commercial organization of the market and in succeeding chapters to causes, effects, and administrative policies which are strictly economic in character.

MARKETING

In its administrative phases, trade is called marketing. Marketing is a term that may be applied to the management either of the process of distributing the goods of the producer among the consumers or the process by which goods are acquired by the latter. There is the same transfer of goods to be effected in either case, and the process may be directed either by the seller or by the buyer. However, the word "marketing" is now practically lost to the buyer. Formerly the people of the rural districts spoke of going to town "to trade" or "to do the marketing." But these people, as well as consumers in the cities, have abandoned the use of such phrases in connection with their purchasing activities. They call their visits to the stores "shopping," an expression, incidentally, which signifies a somewhat greater amount of preliminary activity and much less of resulting exchange than do such expressions as trading, buying, and marketing. As a matter of fact, the producer, much more often than the buyer, assumes the aggressive in the market, and because he undertakes to control the methods and machinery by which his goods are brought to the attention of purchasers, we commonly think of marketing as a problem of the producer alone, and we relate the term entirely to the administration of selling.

SALES MANAGEMENT

In a very simple market the producer's only task might be that of coming to terms with a prospective buyer as to the price to be paid and the time of payment. In markets as extensive as those of the present, the producer has first the very definite problem of finding a buyer. This may make it necessary for him to publish widely in newspapers and similar mediums the announcement of his desire to sell, the nature of the goods he offers, and the terms he proposes, or to communicate directly by mail with many possible customers. Methods such as these are known as advertising. It is possible to use salesmen and canvassers for the same purpose. These aids to selling may be in continuous use either as a means of finding new customers from time to time or as a means of keeping in constant touch with regular customers previously attached to the producer or his product. Since production is not always

undertaken simply in response to existing demand, advertising and salesmen may be employed also to create demand, which they do by instructing people as to the nature and use of new commodities and by persuading them of the desirability of the goods offered for sale. The same selling devices, finally, are put to the service of competition. The goods or services of a particular producer are made to appear in the most favorable light, and their superiority is emphasized by methods suggested in our discussion of valuation in an earlier chapter.

The sales manager in a productive organization has much to do in the way of organizing his department, determining the policies to be followed in selling, and planning the program of operations before he is ready to establish contacts directly with prospective purchasers. The subordinates of his department may conduct the actual operations of selling, but the manager himself must consider his budgetary allowance, determine the direction his expenditures are to take, set the mark of successful performance, and prepare to keep such records of his department's activities and of responses on the part of purchasers as will show whether or not his department and its activities have been conducted successfully and economically. There are policies to be decided upon which have to do with prices, credit, discounts, delivery, brands and trade-marks, warranties, the adjustment of claims, and numerous other matters. Many of the plans and policies depend upon an analysis of the commodity and of the conditions affecting the individual concern's productive efforts. Often when we think of selling, we have in mind only the final act of inducing the customer to buy. It must appear from the foregoing that this is no more correct than to regard any other productive operation as consisting only of the final or finishing touches.

Selling is not necessarily demand creation, nor even persuasion; it is the making of contracts for the transfer of the ownership of goods from seller to buyer. In the paragraph above we have shown the process to be a very complicated one at times. But it is not essentially so. Many sellers undertake no such selling activities as do the producers who sell direct to the consumer and to whose practices the description of the administration of selling given above is especially applicable. Certain manufacturers and almost all farmers rely largely or entirely on the merchants for the disposition of their products. In fact, the choice between di-

rect and indirect methods of marketing should be included in the enumeration of the decisions which any sales manager is to make, for large and small concerns alike and those of almost every type have the opportunity of selling either directly or through the medium of the merchants. We are likely to underestimate the extent and importance of the sales made by the farmers and others who have no organization for selling and who simply make informal contracts with dealers with little in the way of preliminary negotiations. The latter are engaged in selling as well as are those who conduct spectacular selling campaigns, and their sales may even be the greater in number and importance.

THE MANAGEMENT OF PURCHASING

The administration of buying parallels that of selling, though the former is much less highly developed. The purchasing agent of a producer must acquaint himself with the nature of the goods which he is expected to buy and with every condition affecting their production. He often traces the commodity to its ultimate origin, even though he buys through the merchants, in order that he may be a competent judge of values and be better able to anticipate the changes in market supply which affect prices. The purchaser for a productive enterprise adopts policies with regard to such matters as insistence upon quality, the purchasing of large rather than small quantities, the use of credit, taking advantage of discounts, buying on brand or trade-mark rather than upon specifications, making use of the services of merchants, and awaiting the approach of the seller rather than advertising for bids. The ordinary consumer, however, is seldom an expert at buying; consequently, he relies very largely upon the retailer, making no such extensive preparation for purchasing as a factory buyer might, and having few well-defined policies to govern his relations with the market.

The merchant's administration of buying and selling, though differing greatly in many practical aspects from that of the manufacturer, is the same fundamentally. It is a matter of organization, of buying and selling policies, and of approaching the market on the one side through purchasing agents or otherwise, and on the other, through advertising or salesmen. The merchant, presumably, is a specialist in buying.

FUNCTIONS OF THE COMMERCIAL ORGANIZATION

The existence of numerous productive units specialized in the business of assisting extractive, propagative, and manufacturing concerns in transferring goods to others of their own number or to the ultimate consumer is to be explained by the following facts, all of which, in turn, are to be explained by the division of labor. In the first place, buyers and sellers are often in different localities, and it is not always possible for the seller to deliver the goods at the place at which the buyer desires to receive them. Thus, the farmer is in no position to deliver wheat to some distant flour manufacturing city nor is the miller prepared to receive the wheat at the local shipping point. Secondly, buyer and seller are not generally in agreement as to the time when goods should be delivered. People desire to buy apples in February and March, but the producers prefer to sell them in October. Producers and consumers have different interests, in the third place, in the matter or the quantity to be delivered. One who uses textiles in the home is willing to buy only a few yards at a time, but the mills sell only in great lots, disposing sometimes of an entire season's output at one time. Again, producers are often specialized in the production of goods of one quality only, while consumers desire to compare and select from goods of several grades. This becomes a very difficult matter when the buyer is compelled to go to each producer separately. Still another point of difference lies in the fact that buyers and sellers are not always in a position to accommodate each other as to the terms of payment. Manufacturers who sell widely may have no adequate means of determining the willingness and ability of their customers to pay, and yet the latter may insist upon credit. Finally, the very difficulty of establishing business connections makes it practically impossible for most buyers and sellers to deal directly with each other. Many a producer's output is distributed to thousands of consumers, and all consumers buy the products of hundreds of producers. It would be a very costly thing to maintain direct lines of communication between every producer on the one hand and every consumer who made use of his product on the other.

The weakness of a market in which there is no provision for anything but direct selling becomes evident if one considers what the task of a farmer who produces grain, beef, pork, eggs, milk,

fruit, and vegetables would be if he were to attempt to sell these all to their ultimate consumers, particularly if he were not located near to a city of some size. Many farmers in regions of diversified agriculture have such a list of products to dispose of. The difficulties of the consumer are even greater than those of the producer. It would be practically impossible for one to buy directly, in the quantities in which they are commonly purchased, the goods brought into an ordinary household in the course of current trade. They come from every corner of the earth. On the other hand, the merchandising system need not, and does not, supplant entirely the method of direct exchange.

Through the assistance of the merchants, something analogous to a clearing house for the transfer of goods is established. The clearing system thus established is not so ideally complete that every producer may send his output through one channel alone and every consumer buy at only one store; but in each of its several divisions at least, the market organization undertakes the assembling of the goods of the individual producing units; unites the incoming consignments of unsuitable sizes; sorts, grades, and divides or relots them to the satisfaction of purchasers; and finally distributes them to the consumers of all parts of the market. In order that producers and consumers may both be accommodated in all the points in which their interests conflict, the merchants are prepared, generally speaking, to collect goods at the places and at the time desired by the producers, to take such qualities and quantities as may be offered, and to make prompt payment when necessary; and also to transport goods to the retail markets, store goods until they are required by purchasers, sell in large lots or small, straight or mixed, and to allow credit to customers to the extent required. In some instances, the merchants complete the process of manufacture. Their operations in the latter connection are known as processing; the roasting of coffee is an illustration. They assume, to some degree, also, the risks of changing prices and of losses through the deterioration and destruction of goods.

SPECIALIZATION WITHIN THE COMMERCIAL ORGANIZATION

There is no one sequence through which all goods go on their way through the market, though the statement of the functions of

the commercial organization suggests that there are three principal steps in the marketing process considered as a whole. The first of these is the initial marketing through a local agent, who serves especially the interests of the producer. The second is wholesaling, where assembling is completed and dispersion begun. The third is retailing, or selling to the consumer. In the markets where the process is most complex, wholesaling is subdivided, and the number of middlemen intervening between producer and consumer is greater than in other markets. Some goods are sold with the aid of only one middleman.

Commercial concerns, the merchants, or middlemen, of the market, differ in many particulars. They are, generally, functionally specialized—some being wholesalers, some retailers, and some restricted to a single activity in one of the divisions of the market. They are often specialized also in respect to the goods they handle. Thus, some deal only in grain, some in textiles. There are also certain fairly well-defined "lines," such as hardware and dry goods. Many concerns, on the other hand, are not specialized as to commodities or even as to functions. Great department stores and some wholesale houses deal in almost every conceivable commodity that one might buy for personal or household use. Some merchants own factories, do an extensive wholesale business, and conduct retail stores through the same general organization, though through somewhat specialized divisions of the organization. The differences in the size of various units of the commercial organization are also noteworthy. In the wholesale market some dealers maintain an office in a single room and conduct business by the use of the telephone and telegraph, receiving no goods for storage and handling. Others have great organizations with many departments, store and transfer goods, and offer many incidental services to those from whom they buy and to whom they sell.

MIDDLEMEN OF THE INITIAL MARKET

In fields where the producers operate on a comparatively small scale and exist in sufficient numbers to justify a local market, conditions generally characteristic of agriculture, there are buyers whose function it is to begin the process of assembling. While even among the farmers there are many who do not require the

services of local buyers but send their products directly to the central markets, for the numerous small producers of agricultural products it is a matter of great economy to transfer all the burden of establishing connections with the wholesaler entirely to these special buyers in the local markets. Farmers are able thus to dispose of crops at the time of harvest and avoid the necessity of providing storage facilities of their own. They may convert their products very promptly into cash and save themselves the financial burden and the risk involved in carrying the products. If they choose to await the most favorable prices, they may dispose of their commodities quickly when the proper time comes. Delay and cost in shipping, which are especially serious to producers who have only small quantities to sell, are eliminated by the local buyer, who consolidates small lots in such a way as to secure the most favorable freight rates and to insure the finding of a purchaser in the central market.

The country stores, which were, and in so far as they still exist, are, retail establishments, have performed the functions of local buyers to a limited extent. In some parts of the country, they have taken in trade the small lots of vegetables and dairy products which the farmers produced as by-products or secondary crops. In other places, they have undertaken to buy and dispose of the principal or so-called money crops of their customers. In cotton producing districts, this is still a feature of local marketing. At the same time, there are buyers who are specialized to a high degree and who buy only one product. The grain elevator men, the cotton buyers or factors, cattle buyers, and the cash buyers who deal in eggs and poultry may serve as illustrations of specialized local buyers.

A service of the same nature as that offered to the farmers is performed for the small manufacturer by certain middlemen who are to be described generally as selling agents rather than as local buyers. These middlemen do not maintain local establishments. There are not many manufacturers, however, that need to make use of the selling agent in disposing of their products. Most are strong enough and organized well enough to require no such assistance, and they sell their goods to the wholesaler, to retailers, or even directly to the consumer himself. The farmers also are becoming less dependent upon the middlemen than formerly and are now combining more extensively than ever before to consol-

idate their shipments to the central market. Cooperative organizations are coming to take the place of the local buyer in many places. Nevertheless, the service offered by all these middlemen is often sufficient to justify their use to some extent even when more direct methods are available.

THE RETAILER

A service to the consumer corresponding to that of the local buyer and the selling agent to the producer is performed by the retailer. While he often puts himself in the position of a special salesman for the manufacturer, his primary function is the purchase of goods of such kind and quality, in such lots, and at such times as the consumer may require. He is able to do this much more economically, generally, than the consumer can do it for himself. When buying directly, the consumer finds it necessary to take goods in quantities he would not otherwise consider and is put to the necessity of storing goods and running the risk of loss through their deterioration. He finds it necessary to make large payments and often is unable to get the privilege of deferred payment. He encounters difficulty in obtaining goods of the quality he desires, since one producer may not always be able to provide goods of the same grade as previously and may not have many grades on hand from which a selection may be made. The retailer may save the consumer the time necessary to communicate with a hundred producers and the delay involved in delivery from many distant points.

Retail concerns may be classified upon the basis of differences in internal organization as unit and department stores, upon the basis of the number of commodities or lines carried in stock, as general and specialty stores, and upon the basis of the number of establishments maintained, as single and chain stores. These concerns differ also in their methods of selling; consequently, mail order houses are to be distinguished from stores selling over the counter. The classifications given do not reveal perfectly the actual types of stores to be found in the retail market. The so-called general, or country, stores are ordinarily single unitary establishments handling a few lines such as dry goods, groceries, and hardware. The department store is a general store with departmental organization handling many lines purchased for the

most part for household use or for the personal use of women. Dry goods is its central line. The specialty stores each carry either jewelry, furniture, shoes, clothing, or some one of a number of other lines. Mail order houses are departmentized general stores catering particularly to the rural and village trade and carrying a more complete stock than do even the city department stores. Some of the great chain systems maintain general stores of a special type such as the ten-cent stores, others have entered the same field as the department stores, and still others, the greater number, are specialty systems.

Retail organization has undergone many noteworthy changes in recent years, and further developments of considerable consequence to the market are to be expected. So far, these changes have resulted principally in new types of retail concerns and in a new relation of the local merchant to the purchaser. The chain stores, just mentioned, are of especial importance, not because they are to dominate the retail field as some think, but because they introduce outside control into local retailing to an extent until recently unknown in this country. The retail market, except for the competition of mail order houses, has been in the hands of local merchants almost entirely, and generally of small independent merchants. The entrance into the local markets of an absentee control by corporations of great size is a force the future effects of which we may not attempt to predict in this brief survey of the commercial organization.

Recently the manufacturer has been able to dominate the ultimate market to such an extent as to make the retailer in many an instance merely his agent in market competition. Thus, local merchants are given an exclusive or a limited agency for certain branded goods, which they sell in connection with a full line or as their sole stock in trade. Sometimes the manufacturer establishes a local branch store in the hands of his own employees. Local stores have thus in a measure become a part of the marketing organization of the producer himself and have entered into demand creation in the interest of the original seller and even into his competitive conflicts. Certain great wholesale houses have entered the retail field in a similar manner. This development is not only an introduction of a new factor of control in retailing but works a modification of the retailer's very position in the market system. The proper function of the retailer is to represent the

consumer in the market, to discover the nature of his wants and their relative intensity, and to buy with a view to his satisfaction. Unless the retailer performs this service, the consumer, least qualified of the factors of the market because least specialized, is left to work out his consumptive selections unaided by anyone more familiar with goods and the market than himself.

MIDDLEMEN OF THE WHOLESALE MARKET

While the merchants of the wholesale market perform the essential function of adjusting demand and supply for the market as a whole, it is not always true that the goods they receive from the initial market are delivered by them directly to the retail market. Many materials must go through the wholesaling process twice. The supplies assembled by local buyers are of two classes: those ready for consumption and those which are to go through the process of manufacture. The latter are purchased as raw materials by the manufacturer generally in the wholesale market itself and are delivered as finished goods to a second wholesale market where again, in a few instances, they may be purchased for further manufacture. Wholesalers deal, therefore, not only with retailers, but also with buying and selling producers.

The wholesale market for farm products is the most extensive and elaborately organized; that for raw materials from other sources, the least so. The latter commodities are supplied by comparatively few producers and only in the case of fuel do they enter extensively into the retail trade. Manufactured goods are widely produced and widely distributed, and hence require more wholesale market service than do minerals, but, on the other hand, they are more completely prepared in the beginning for distribution than are farm products, and the manufacturer is generally in a better position to establish direct connections with retailers and consumers than is the farmer. Only in the great markets for agricultural products is there a need for a functional subdivision of the wholesale business.

The names of certain of the middlemen of the wholesale market are so familiar and yet so frequently subject to indefinite and improper use that it is desirable to define them briefly. The wholesaler is any one of the merchants of the wholesale market. Those engaged principally in the receiving of goods from local buyers, as

in the case of agricultural products, are called wholesalers if they buy outright from those who ship to the central market, or commission men if they receive goods on consignment and sell for the shipper on commission. They may be called wholesale receivers in both cases. In the markets for cattle and wheat there are wholesale receivers who are known as commission men though they do not actually sell goods on commission. The name adopted at an earlier time is retained in the case of many merchants after their methods of dealing have changed. Those who are engaged principally in the distribution of goods by sale to retailers are known as jobbers. They make their purchases from the receiving wholesalers. A third group of dealers are known as brokers. The true broker, wherever found, is one who does not buy and sell goods on his own account, but brings buyer and seller together in order that they themselves may make a trade. The real estate broker often is a true broker. There are wholesalers using the name of broker who do not confine themselves strictly to the broker's methods of doing business. Brokers may appear in any part of the market. Though they are very useful in adjusting demand and supply between the receiving and jobbing divisions of the market, they also buy from one receiver and sell to another, and themselves act as receivers. In general, they serve as equalizers within the market, taking unexpected surpluses from one dealer and meeting the unexpected requirements of another. There is still further specialization of wholesale middlemen as illustrated by the shippers and exporters of goods who help in keeping the markets in different parts of the country and of the world in line with each other.

In the wholesaling of manufactured goods, the middlemen who sell to retailers may be known either as wholesalers or jobbers. In fact, the word "jobber" originated in a day when these dealers bought the entire output of a factory or as much of the output, rather, as constituted one job for the factory. Because they bought job lots, they were known as jobbers.

THE TRANSPORTATION SYSTEM

The operations of commercial concerns and of all buyers and sellers are dependent to some extent upon the system of transportation. Only the very least of the retail stores and a few produc-

ers selling direct would be able to collect supplies locally and sell only to buyers near at hand. The subject of transportation requires more extensive treatment than we may give it at this time, but we may now indicate the position of the agencies of transportation in the commercial organization and the nature of their service to commerce.

The freight service of the carriers consists of the movement of goods from place to place as a part of the process of assembling and distributing and as an incident of the adjustment of market to market. The handling of freight requires more in the way of equipment and involves much more in the way of service than the word "transportation" suggests. Special railway tracks are to be provided for the convenience of shippers; warehouses are to be maintained for the temporary storage of goods; land is to be leased for private warehouses; and equipment, sometimes very costly, is to be provided for the loading and unloading of railway cars and boats. Certain goods are to be given especial care while en route, as, for instance, live stock, which must be unloaded, fed, and rested at intervals of a long trip. Perishable goods of other sorts are carried in refrigerator or other special cars and are given the protection of the carrier. Valuable freight, such as money, jewelry, and silk, is carried by railways and express companies under conditions calculated to insure its safety. Special trains are often run at extra speed to give sellers quick access to distant markets. Practically all trains are timed for the convenience of the market, including even the passenger trains. While the latter do transport persons engaged in every sort of economic activity and are sometimes used for pleasure, that is, as a consumer's good or service, their importance to commercial activity is very great, and the carriers, consequently, adjust their service to market needs. To much the same extent, the mail, telegraph, telephone, and other communicating facilities are agencies of commerce.

Transportation companies assist buyers and sellers with other than physical services. They issue negotiable bills of lading which permit the transfer of the ownership of goods while the latter are in the hands of the railway. These bills serve also to assist in the collection of payments. Railway companies provide for the diversion of goods, while en route, from the market to which they were originally consigned to some other where it may

seem to the shipper more profitable to dispose of them. The rate systems of the railways are worked out supposedly after the most thorough consideration of the costs of production and the market prices of the commodities handled. The carriers equalize the advantages of different commercial cities and make rates to permit the sale of all important commodities wherever they are greatly needed, though it may be necessary, in order to accomplish this, to disregard in making the rates the exact transportation cost. In such ways as these the transportation companies are made the servants of the commercial system.

THE WAREHOUSE

An essential part of the equipment for the physical handling of goods in the market is the warehouse. Some producers maintain warehouses at their own establishments; others locate them at transfer points or in the final market so that they may the more easily dispose of their goods by direct sale to the consumer or at least with the elimination of some of the middlemen. The initial middlemen themselves provide storage facilities in such buildings as the local grain elevators and tobacco warehouses. In the principal wholesale centers there are terminal elevators and warehouses where the supplies assembled from the initial market are kept until finally disposed of by the wholesalers. Some of these warehouses are owned by the wholesale receivers, and others are maintained by independent warehousemen. At all important transfer points, and particularly at the ports, there are warehouses for public use, where goods of every sort may be stored either in intervals of their transshipment or for long periods while they are awaiting the demands of the market. Some of these facilities are highly specialized and provide for one class of goods only. Others are general warehouses that handle many kinds of goods.

Warehouses afford a varied and extensive service. They undertake to protect goods again every cause of loss. Perishable goods are kept in dry, warm, or cold storage. Cold storage is provided for goods that require a mildly cool temperature and for those that must be kept below the freezing point. This service enables wholesalers to carry such commodities as eggs and butter for a period of from six to nine months and results in an equalization

of supply between those periods when the product is produced in great quantities and the times when there would otherwise be a shortage. In addition, the warehouses undertake all the physical, and even the commercial, services which a producer or merchant might perform in his own storeroom. They prepare goods for shipment, attend to the making of contracts with carriers, and issue warehouse receipts which enable the owners of the goods to sell without the movement of the goods themselves.

The Federal government maintains warehouses in which imported goods may be held pending the payment of duties. The warehouse is so essential to commercial activity that some municipalities have undertaken to provide public facilities for storage. In New Orleans there is a municipal cotton warehouse. The fact must not be overlooked that these agencies of the market are not engaged simply in providing a service for the occasional convenience of merchants and other shippers, but that they perform an essential part of the work of effecting the transfer of goods from producer to consumer and are an important influence on prices, since they preserve and carry over the surpluses of one season into another. They are an aid to the concentration and distribution of market supplies which is made necessary by our geographical division of labor, and they are a fundamental factor in the adjustment of supply to demand.

AUXILIARY AGENCIES OF THE MARKET

At every step in the marketing of goods, sellers may draw upon certain independent concerns engaged in providing some one service for the assistance of the seller. The financial organization is, in a sense, just such an agency; it assists in the making of payments. But since its service is so extensive, we have chosen to regard it as belonging to a principal division of the market rather than as a subordinate factor in the market for goods. However, advertising agencies, credit and collection agencies, and the various concerns supplying market information are adjuncts or auxiliaries primarily of the merchants and the selling departments of producers. Specialized and expert advertisers undertake to plan and administer campaigns of advertising for the purpose of introducing new commodities, creating new demands, or building up the reputations of producers. The advertising agencies give coun-

sel and advice in connection with the ordinary and routine selling operations of the commercial organization. The special advertisers and the sellers themselves make use of the journals and newspapers, and to that extent these publications become instruments of the market. Credit and collection agencies supplement the work of a part of the sales organization by supplying information concerning prospective customers, which information may be used in determining whether or not contracts may be made with such customers and to what extent they may be given the privilege of deferring payment. While the making of collections seems hardly to belong with the making of sales, it is often coupled by these agencies with credit investigations as a matter of convenience. Though the credit agency itself is not an instrumentality in the making of loans and is not to be regarded as a part of the financial machinery of the market or of the individual concern, in making investigations among those who may be customers it establishes ratings which may be used in connection with financial transactions. Those who supply market news to the traders and report on market conditions are also auxiliary to the commercial organization. Such a service is performed by associations of merchants, by bureaus of the Federal and state governments, by the telegraph companies, and by private statistical organizations which specialize in this activity.

TRADE ASSOCIATIONS

The associations formed among the various traders of the market are not always for strictly commercial purposes and do not all belong in an enumeration of the elements of the commercial organization. Nevertheless, they are an important factor of control in many instances and go to the extent of conducting trading operations in some cases. The units of these organizations in the United States are numbered by the thousands, and no understanding of the market is complete without some knowledge of them.

There exist many local associations of the retail merchants with membership restricted to merchants of a certain line of the retail trade. The local organizations may be affiliated with a state association, and the state association with a national, or even international, organization. We may mention, for illustration, the state associations of retail dry goods merchants and the National Re-

tail Dry Goods Association. There are similar organizations among the grocers, and likewise among the manufacturers of a single commodity, such as brick, which organizations are interested in the development of trade in their particular commodities. On the other hand, there are associations, such as the local chambers of commerce, which include in their membership people from many trades. Some of these are interested in the general development of the commercial activities of a city, in the improvement of trade methods in many lines, or in the elevation of the plane of competition in general. Others have civic as well as strictly commercial interests, and some carry out their purposes in part by social intercourse and educational programs. There are associations to study a single phase of market operations, as do the advertising clubs, and others to perform cooperatively one of the market functions, as in the case of local credit associations.

We may summarize the purposes and the activities of the various associations considered collectively, disregarding for the moment the associations actually engaged in trade. In the first place, they attempt the improvement of market methods by distributing information, adopting standards of practice, and establishing uniform accounting procedure. Secondly, they cooperate, sometimes in advertising, sometimes in the matter of credit investigations, and ratings, and occasionally in the promotion of legislation of direct commercial or civic benefit. In the third place, they undertake educational activities, going even to the point of establishing schools and, in other cases, maintaining bureaus where expert advice and assistance may be given their members. Their meetings and their conventions are sometimes educational in their general purpose. It has sometimes happened, finally, that these associations have undertaken to regulate prices and in so doing have violated the law. It may be that their activities in some particulars have not always been in the public interest. This is far from being true of the great majority of the associations, however, and we find among them many that have set about to eliminate every unfair practice among themselves and in their dealings with the public. In this connection, the associated advertising clubs are noteworthy.

The service of trade organizations to the community as a whole is to be found in their help in the professional development of the merchant, in the improvement they make in business methods, in

the generally beneficial effect they may have on the attitude of the merchants toward public questions, and in the creation of a fund of scientific information which is available for the business development of the entire economic organization. These tendencies to real productivity in all probability offset the waste of time involved in the holding of too many conventions, the occasional improper participation in politics, and the price fixing activities in which some engage.

THE COMMODITY EXCHANGE

Those trade associations which undertake to conduct trading activities have an additional importance in that they are participants in the principal processes of commerce. They are organized much as are other associations, and in fact they do not themselves buy and sell. However, they undertake systematically to regulate the transactions of the traders who are their members. In addition, they arbitrate disputes, offer such services as the grading and inspection of the commodities in which their members deal, and provide market information, particularly as to supply and prices, which is of service to all dealing in the commodities reported whether such persons are members or not.

Certain associations maintain commodity exchanges and provide a trading place where members may assemble and deal directly with one another. In some of the exchanges there is trading for future as well as immediate delivery. There are the so-called speculative exchanges which deal in grain, produce, coffee, cotton, and other raw materials. Among the members there are many classes of dealers, including the commission merchants or wholesale receivers, buyers for manufacturers, bankers through whom bills are drawn, agents of shipping companies, insurance agents, exporters, expert buyers who make purchases for other members, and future brokers.

There are commodity exchanges less highly organized which have no trading for future delivery and the most of whose transactions are conducted from office to office. Thus, in a great produce market, there may be a wholesale grocers' exchange which publishes a daily price sheet. Other associations of this second group hold daily meetings where traders come to make bids and offers and thus establish a price to govern the transactions of the

market, though most of their actual purchases and sales are made privately in the district in which the dealers maintain their offices. In addition, there are such exchanges as those of the stockyards, where a continuous open market is conducted and where the buyers for the packers, for shippers, and for cattle feeders deal with the commission men who receive cattle from the farmers.

A third type of exchange is found in the auction market, where a trading place is maintained by an auction company or association, and where sellers and buyers of all types are permitted to dispose of their supplies and to make purchases. The fur exchange of New York is of this sort. The wholesale fruit auctions in the great cities dispose of citrous and other fruits on behalf of cooperative associations, other shippers, and wholesale receivers, and sell to wholesale grocers, fruit jobbers, retailers, and consumers of large quantities.

Finally, there are exchanges for the purpose of exhibiting goods, though it may be a stretch of the term to call them exchanges. In Europe they are known as fairs. In certain cities in America there are established great display buildings where such commodities as builders' supplies or furniture, or even miscellaneous manufactured goods may be put on display and where orders may be received from purchasers. The various public state and county fairs in the United States, while educational in purpose, have served incidentally, if only in a small way, as markets.

THE COMMERCIAL SYSTEM

Only very recently has any considerable attention been given to the scientific development of the commercial organization of the market. The movement which has given us many important improvements in productive organization and in business methods generally has hitherto had little influence in merchandising practice. Little scientific data is yet available upon the basis of which marketing costs can be determined, and there is little satisfactory knowledge even of the internal organization of commercial concerns. No systematic adjustment of the marketing machinery as a whole has taken place. Improvements have been made, it is true, both in the specialization of middlemen, with an increase in the number of merchants appearing in some sequences, and in the methods of direct marketing, by which the number of middlemen

is reduced in other sequences. Thus there have been tendencies toward both elaboration and simplification. In fact, the elaboration of the commercial structure may itself have involved a measure of simplification, for, as we have discovered in the study of finance, the greatest directness, effectiveness, and economy are sometimes to be secured through the agency of an intricate organization. Nevertheless, our study so far reveals no coordinating machinery of consequence in the entire market and no such systematized activity as prevails in a part, at least, of the field of finance.

The cooperative movement is the one noteworthy attempt at the reconstruction of the market. Though consumers' cooperation has made comparatively little headway in the United States, the dissatisfaction felt by the farmers with conditions in the initial and wholesale markets has given an effective impetus to producers' selling cooperation. The resulting progress of the cooperative movement has been the most striking development of the entire economic system in recent years.

COOPERATIVE MARKETING

The cooperative associations for the marketing of farm products, to be found now in all parts of the country, are of varying strength and importance. However, the significance of the cooperative movement is revealed not so much in the success of individual cooperative undertakings as in the scope and strength of the cooperative movement as a whole. It is possible to give only a suggestion here of the part the farmers' associations play in the marketing of farm products. In the north central territory there are cooperative creameries to the number of 600 or 700 in a single state. Cooperative cheese factories serve also as an outlet for the products of the dairy farmers. There are elevators under cooperative control in all the districts west and north of Chicago and in other regions as well. The live stock shipping associations serve a clientele of a million or more. The potato warehouses in certain districts are under cooperative control. Cotton, tobacco, rice, and citrous fruits are marketed cooperatively in the southern part of the country. The California Fruit Growers' Exchange handles probably 75% of the citrous fruit grown in California. There are similar associations for the marketing of rice, raisins,

peaches, prunes, apricots, almonds, lima beans, and other western products. In Canada, as well as in the United States, cooperative associations attend to the marketing of grain, live stock, wool, butter and eggs.

It is the purpose of the cooperative organizations to serve the farmers much as the middlemen have attempted to do in the past but to improve upon the service the latter have actually given. They hope further to create better outlets or channels of distribution, increase the demand for certain commodities, and eliminate the losses involved in the improper concentration of supplies and in the delay so often attending their distribution. They are attempting also to standardize products in the interests of both the producer and the consumer and to collect and distribute market information by way, not only of assisting in the transactions of the market itself, but also of controlling the conditions which determine the adjustment of supply to demand.

Whether or not all the associations have been entirely successful and whether they have accomplished all that they have hoped to accomplish in lowering costs or in increasing even the gains of the producers is not the only issue upon which the future of cooperation rests. The new factor in the market may have succeeded in effecting a distribution of goods more satisfactory than that of the past either to producer or consumer or to both, regardless of particular items of financial gain or reductions in cost. It is not possible at this point to examine the evidence which might show whether or not this has been accomplished.

It may be said, finally, that cooperative marketing, as now conducted, does not betoken a complete reorganization of the market. The local associations deal with jobbers and retailers and make use of the market machinery in general. They have entered the wholesale market only to a limited extent and have not invariably undertaken to eliminate the wholesale middlemen, to say nothing of retailers. Their organizations are not necessarily coordinated with each other, though in some cases the local associations are federated, and the larger federations conduct operations that are sometimes nation-wide in scope and effect.

XXII

GENERAL COMMERCIAL POLICY

The essential basis of trade. The process of indirect exchange. The balance of trade. Mercantilism and the balance of trade. Local mercantilism. The gains of trade. Absolute and comparative advantages. The advantage of a favorable market. The trend of interregional trade. The restriction of international trade. Causes tending toward freer trade. The trend of American foreign trade.

Ancient as is the world's commerce and firmly established as is the exchange of goods in the present economic system, there is as yet no universal understanding of the benefits to be derived from trade. The social policies that are to govern this phase of economic activity are matters of much disagreement, largely because of the uncertainty which pervades popular thought as to the nature of the gains of trade. Probably no one goes quite so far as to suggest that we abandon all buying and selling, but many, intentionally or otherwise, raise constantly the fundamental question of the economy of the exchange of goods, as they propose and urge the elimination, or at least the restriction, of commerce between one city and another and between nation and nation. A more thorough study of the nature of commerce than we have yet undertaken is essential to the formation of sound judgments on general commercial policy.

THE ESSENTIAL BASIS OF TRADE

Every exchange of goods depends upon the existence of a surplus of some one commodity in the hands of each of the traders. If surpluses of this sort were created only as a matter of chance or poor management, there would be no dependable opportunity for advantageous trade. Surpluses are actually created as a part of the economic plan. They arise from the supposed benefits and economies of the division of labor. The goods available for trade are produced by those specialized in creating supplies of particular kinds for market use, and since most of the goods are not desired by the producers personally, there must be trade.

The fact just stated relates to the cause of trade. Four additional facts of importance are the basis of all we shall say in explanation of the results of trade. In the first place, goods are traded for goods. No intervening indirect payments should be allowed to obscure this truth. One disposes of the things he has for sale for money, but only because money carries with it the same purchasing power as the goods themselves had and because it serves the convenience of the producer in securing the commodities he prefers. The goods he receives are paid for with those he produced for that purpose, no matter how many steps there may be between the disposal of the one and the acquisiton of the other.

Secondly, there can be no selling of goods, generally speaking, unless the sellers are also willing and able to purchase, since the buyers to whom they would sell have no means of payment except as they are permitted to dispose of their own goods and services. We may state this matter in terms of foreign trade. There can be no exportation unless there is importation, and the country as a whole cannot buy goods abroad unless it has something to ship in payment.

Thirdly, traders exchange goods only upon the basis of equality in market values. In the organized market, goods are bought and sold at current market rates, and those who sell a dollar's worth of goods, receive, when they buy, a dollar's worth of goods in return. In direct exchanges, goods are traded evenly only for goods of equal exchange value. The very fact of the trade reveals the equality in market values.

The fourth fact is that ordinarily there is mutual gain in trade. If either of the traders were to receive goods capable of yielding less satisfaction or only as much satisfaction as the goods he transferred, there would be no object from his standpoint in making the exchange. Obviously, this does not mean that the traders both gain in market values but, rather, that they both gain in personal satisfactions. One sells a commodity which he has produced for the market at its market value, but since it constituted a surplus in his own hands, he gains in satisfaction by exchanging it for something more suited to his own desire. It does not follow, either, that both traders gain to the same extent; we must give that matter further consideration. It may happen, also, that one or the other fails to gain as much as he might because of his

inferior bargaining power. Finally, we may not be sure that a particular trader gains by the process of trading as much as he might by producing for himself such goods as he acquires by trade. That is a question of the proper division of labor. Nevertheless, ordinarily there is mutual gain in trade.

THE PROCESS OF INDIRECT EXCHANGE

So much of the language of the market is the language of payments, and there is so little need, generally, to take account of the ultimate disposition of the things one sells and the original source of the goods one consumes, that the fact that goods are traded for goods, with money and credit instruments only as a medium of the transfer, is easily forgotten. Possibly some never go deeply enough into the workings of the modern market to comprehend it. Others, familiar with economic activity, are so accustomed to the financial point of view that they overlook the underlying exchanges which result in payments.

We find it difficult to trace the actual course of goods, not only because they pass through many hands, but also because the commodities exchanged, by means of money or otherwise, are not the exact equivalents of each other. Thus, one disposes of a machine he has manufactured but makes no single purchase of exactly the same value. Furthermore, the total of the goods received by traders generally is not exactly equal to the total of the goods that they dispose of at the same time or at any other one time. It will be possible, however, to illustrate the trade process by assuming transactions simpler than those of the actual market. The hypothetical illustrations will be recognized, no doubt, as conforming sufficiently to reality to reveal the truth of the proposition that goods are exchanged ultimately for goods.

Let us suppose, for the present, that all the transactions with which we are concerned are confined to one community. A gardener having a surplus of produce to dispose of sells the produce to a grocer. The grocer takes the goods in store and sells them or other commodities to a lawyer. The lawyer makes use of the groceries and renders service to a clothing merchant, who, in turn, delivers clothing to a physician. The physician performs a service for the family of the hardware dealer, and the latter sells garden tools to the gardener. Thus, the gardener finally receives

payment for his produce. No two of the traders mentioned are assumed to have exchanged goods directly with each other, yet each gave and received goods. Every one of the purchases was necessary in order that one of the traders could dispose of his product, and each sale was a part of the process of making final payment for that product. Wherever there is an elaborate division of labor, the real exchange of goods is dependent upon such an interrelation of purchases and sales; and each one of the traders is involved in many such circles of trade, as that which he supplies to the market is divided and distributed to many demanders, and as his returns come to him from various directions through his purchases.

In the trade circles just mentioned, no account was taken of the fact that the supplies of the gardener might have been sent some distance away and that merchants secure their supplies largely from other places. An interregional exchange might proceed as follows: A farmer of Sandusky County sends apples to the merchants of Toledo. The apples are delivered to workmen who are selling their services to an automobile factory. The factory delivers an automobile to a dealer in Scioto County, and it is sold presently to a farmer there. The farmer ships hogs to a packing house in Cincinnati. Meat is shipped from the packing house to the merchants of Columbus, who sell it to the workmen employed by a shoe factory. From Columbus there is a shipment of shoes to the city of Akron, where they are sold to workmen who are employed by a tire factory. Tires are shipped from Akron, directly or indirectly, to the city of Sandusky, where they are sold to the farmer who produced the apples. The same transactions might have been traced in the reverse order. But whether we begin with a purchase of tires or a sale of apples, the result is an exchange of apples for tires. By the use of money, the farmer is enabled to make his purchase and sale almost simultaneously; and the two transactions, in that event, each start and also bring to an end separate circles of trade.

The exchanges between one country and another are conducted in much the same way. Foreign trade has no fundamental peculiarities. A manufacturer of rugs in Philadelphia may ship a part of his product to Argentina where it enters the currents of trade. Its equivalent in wool is shipped presently to a factory in England. Other English factories send cotton cloth to be used in

India. From India, jute is shipped to America where it may be used by the rug manufacturer or enter into the trade of the country as the equivalent of the rug manufacturer's export.

It is important to see, also, that when one makes an investment, he does so by disposing of his productive output and postponing the time when he is to receive the real income which constitutes his final payment. This is so whether the loan is made in the form of an extension of credit to the person who buys his output or is a cash loan to one to whom he transfers the purchasing power he has accepted from others in indirect payment. The gardener of whom we made use as an illustration above made an investment in tools for his own purposes by selling his produce. He could have placed his investment in the hands of someone else by accepting money for his produce and lending or depositing the money. The borrower then would have converted the latter into the exact capital that he needed in his particular business. When American citizens make investments abroad, they do not ordinarily send money out of the country, but the funds with which they purchase foreign securities are turned locally to the payment of those who are to ship goods; and between the countries involved, the securities are used in effecting the balance of payments. In the foreign country, the borrowers, by cashing the bills they have received, which were drawn on the purchasers of the goods, are able to convert the goods into purchasing power to be utilized as their productive undertakings require. In its ultimate aspects an investment is the placing of the surplus product of the investor at the disposal of another who is either to use it directly or exchange it for the things he may need. The repayment, though made first in money, is only realized in goods. Loans and repayments are the financial phases of trading transactions which are essentially exchanges of goods for goods.

THE BALANCE OF TRADE

While the goods one has to dispose of are not equivalent exactly to any one commodity that he buys and are not of exactly the same value as the total that he wishes to purchase at any one time, yet, in the long run, his income and outgo of goods and services must balance. One cannot continually buy more than he sells, and there is no point, in a commercial sense, to the transfer-

ring of goods to others except as one acquires something in return. There are, however, situations in which, for a time, one may have an outgo of goods in excess of his income in goods or the reverse. In one situation, one may be "saving" and investing. At such times he will sell his productive output and receive credit instruments from someone else, either directly or after an exchange of cash. He acquiesces in, or specifically plans, a temporary excess of outgo in the expectation that he will later receive the principal of his investment together with interest. He can end this situation properly only by buying goods, since if he withdraws the loan in the form of cash and retains the cash, he is only continuing the postponement of consumption and that without any additional gain in the form of interest. A second situation in which one will have an excess of outgo occurs when one is under obligation to pay off his own indebtedness. He acquires the means of repayment by selling his goods or services without making an equivalent purchase of things for his own consumption. There are, likewise, two situations in which one may have an excess of income in goods and services. We have alluded to one of these, namely, the situation in which one is borrowing. The other develops when one receives the repayment of his previous loans or is receiving more in the form of interest on his investments than his present output amounts to.

It is evident that periods of excess income may alternate with periods of excess outgo. One may begin business by borrowing capital. When he does so, he has an excess of incoming goods over outgoing goods, for there is no item of outgo to correspond to the borrowed income. Presently, he pays off the loan. While doing so, he has an excess of outgo in the form of goods which he exchanges for money or other instruments of payment to be used in extinguishing the loan. He may then lend his surplus output, if he continues to have a surplus, and again have an excess of outgo. After a time, he may expect a repayment of the principal of his investments or may come to receive interest upon his loans in such amount as to give him an excess of income. Only this latter situation might be continued indefinitely, but even it would come to an end if all producers accumulated such quantities of capital as no longer to need loans.

An uneven balance of trade between countries in foreign commerce is created in much the same way as in the trade between in-

dividuals within any one country, and there is the same tendency toward an exact balance of exports and imports. The balance can be correctly ascertained, of course, only by taking into account the many services to which reference has been made in the discussion of the balance of payments. If there is an excess either of exports or imports during a considerable period, after these items have all been taken into account, the explanation is to be found in the investments made abroad or received from foreign lenders. Even temporary balances are affected by loan transactions. The remaining temporary differences are settled by the shipment of gold, in addition, of course, to such metal as may itself be sent as an article of commerce. But since monetary gold cannot flow continually in one direction without undersupplying one country and oversupplying others, the gold movements are limited, and goods finally must be used to pay for goods. Since all loans result in the payment of interest at least and are generally repaid in full, long periods when exports exceed imports are followed by counterbalancing periods of greater importations.

MERCANTILISM AND THE BALANCE OF TRADE

For many years, in a period corresponding to the colonial period in American history, English commercial policy was dominated by the mercantilists. Their program was one of national enrichment and went much further than we shall note at this point. One of their policies, however, deserves especial attention just now, because it was based upon a misconception of the nature of trade and of the significance of the balance of trade.

The mercantilists supposed that the wealth of a country is increased by the accumulation of the precious metals. They favored, therefore, the maintenance continually of an excess of exports over imports and the taking of payment for the surplus of exports in the precious metals alone. Possibly there may have been less of these metals than was desired and needed for purposes of general consumption and for use in the monetary system at that time, but a result of this policy was the popular assumption that gold and silver as a means of payment for exports were superior, from the standpoint of the seller, to any goods that he might receive, however useful and desirable the latter might be.

Through the mercantilists, we acquired the habit of referring to an excess of exports as a favorable balance of trade.

For a long time in the history of the United States, there were reasons why it was desirable for this country to have an excess of exports; and the mercantilist idea of the favorable balance, therefore, was firmly fixed in American thought. In the beginning, the United States was a nation without capital, and it received from abroad investments which were transmitted in the form of merchandise imports. We should have had a greater excess of imports than was actually the case had it not been for the fact that our merchant marine was important and its earnings tended to offset the purchases of goods. Likewise, after a time the exportations of gold from the mines of the United States were a means of paying for importations. At any rate, up to the early seventies the United States was a borrowing nation and as a result received an excess of imports. It became necessary after that time to make payments upon the investments which had been made by the people of other countries in American enterprises. The interest remittances were necessarily chiefly in the form of an excess of exported goods. At the time of the recent war it became possible for America to pay off the principal of many of these earlier loans. Consequently, there was even a greater excess of exports than there had been in the preceding period, and the securities of American corporations came back from Europe, where they had been held as evidence of European investments in America. In this whole period of our later history, we no longer held an important place in the carrying trade, and more of our payments were in the form of merchandise than would have been the case if we had had a transportation service to offer other countries. Our exportations were increased also by the remittances which were made to European countries by our immigrant population. The increase of travel in Europe by Americans was of the same effect, since our tourists required a means of paying their expenses abroad. Now that the war is over, America continues to export to foreign countries by way of loans and investments. Though Europe is already greatly in debt to America, the former has little immediate means of payment and has supplies which in the aggregate are inadequate to its own needs. It continues to borrow, therefore, and we continue to maintain with some interruptions our nominally favorable balance of trade.

In view of the history of commercial policy to which we have referred, it is not surprising that there have long been those who assumed that wealth lay in a very especial way in money, or at least in gold and other precious metals, and that these things are much to be preferred to other goods. Since the precious metals are commodities of some direct utility, they are in fact wealth to one who has use for them. They are valuable also in so far as they have the power to command other goods in exchange. It is not true, however, that money is more valuable than that for which it may be exchanged, nor that the former may be made finally to substitute for the latter. Money is purchasing power, and as such it is worthless unless purchases are made. There is no gain, therefore, except temporary convenience, in receiving money in trade rather than goods; and that person or that country which draws to itself great purchasing power and makes no use of it by buying goods has disposed of the original means of satisfying its wants and never actually comes to the point of consuming that which it is entitled to use. The ordinary person is not inclined to handle his affairs in that way. He is anxious to spend his money and saves it for the present only that he may have more, or an adequate amount later. If one is to have a permanent excess either of outgo or of income, one would, of course, prefer the latter. Many save their money, put it at interest, and expect some time to live on the proceeds of the earlier outgo. They desire to have an excess of income over outgo as a final productive reward.

Whether a nation gains by an excess of exports or imports depends entirely on the circumstances under which the uneven balance of trade arises. An excess of exports is favorable to a people paying its debts or lending its surpluses; an excess of imports is favorable to a country in need of investments and to one drawing interest on its former loans, as the incoming remittances on many years of accumulated investments abroad come to exceed the current outgo of new loans.

LOCAL MERCANTILISM

The doctrines of the mercantilists have been very generally discredited, and the fallacy of the reasoning upon which they were based is well understood; but they continue to influence commer-

cial policies, nevertheless, both in foreign and in local commerce. It is the mercantilist point of view that leads some to suppose that there is loss to the community which imports goods and gain to the community "that keeps the dollar at home." It may be worth while to consider further the merits of the consequent policy of local trade restriction.

It is not to be supposed that intercommunity, or, for that matter, international, trade can be entirely avoided among people highly developed in the division of labor. The local mercantilist, however, does not contemplate an abandonment of all trade but only of importations. Among people of highly developed standards of consumption, even this restriction of trade is not likely to be permitted, for few are content to live upon goods of local production only. Even if it were possible for one community to export its surplus and receive only cash in return, or, in other words, always to sell to others and never to buy, it would not be the method for the attainment of maximum satisfaction.

The most that is to be expected, therefore, is such a restriction of importations as will result in a "favorable" balance of trade. It is supposed that money will then flow into the community and none will flow out. If this actually occurred and it were the commodity gold itself that was accumulated locally, prices might advance, and this would be a benefit at least to the merchant class if not to the community as a whole. It would be very difficult, of course, to persuade the customers of retail stores to trade at home if by so doing they increased the cost to themselves of such commodities as clothing and food. But in fact, local accumulations of such money as we use do not affect prices at all, either to the advantage of the merchants or to the disadvantage of the customers, and it is not likely that local prices in any event could be greatly out of harmony with those of the great market which so largely governs them.

But, some may raise the question, would not bank reserves be greatly increased and interest rates, consequently, become lower? If there were such a result, productive costs would be less, to the advantage of everyone. There is no such result, however, because our financial system is coordinated, and the interests of the bankers are such that surplus funds are transferred to the point where they may be most profitably employed. There is, therefore, no local accumulation of money. Furthermore, if traders by buying

elsewhere were actually to send their dollars away in too great an amount, the financial system would draw them back again. The final fact of importance is that the money generally is not sent away, and no effort is necessary literally to keep the dollar at home. The community has, in the long run, only as much purchasing power outside as its exports give it, and by the system of interregional clearance, transfers of cash are avoided.

These things are so well known that the policy of local trade restriction must certainly rest upon some other basis than the "favorable" balance of trade after all. All local products that are sent away enter into the circles of trade which we have described above and are paid for by incoming goods. The merchants who provide the local market in which they urge others to buy, themselves buy in other places. They do not trade with local wholesalers and producers alone. In any sense that the dollar does go away from home, they, as well as others, send it, or at least a major fraction of it. The fact is that local mercantilism is a slogan and competitive device of certain merchants who stand to gain, of course, by attaching as much custom to their stores as possible. Rather than urge the superiority of their goods and service in the ordinary way, they resort to the doctrine of community benefit through keeping the dollar at home, or go to the point of claiming trade on the basis of community loyalty alone.

Prosperous and truly productive enterprises, including retail establishments, are a benefit to any community; uneconomical producers have no claim to community loyalty. All the evidence of well-being that is available, such as per capita wealth and the scale of living, fails to indicate that people prosper invariably by living near to the source of the things they consume and the markets in which goods are bought. The farmers would not gain by locating a store in every township. Not every village and city must have every type of factory and mercantile concern. There is an advantage, through the saving of transportation costs, in producing as near the consumer as economy permits, total costs considered. Retail stores may expect to succeed in close proximity to the consumer and, consequently, to have local support, since personal attention, opportunities for the inspection and selection of goods, quick access to the market, and prompt delivery are items of economy. But there is no advantage to a community in local enterprises at just any cost.

The competent merchant finds the best policy to lie in the solicitation of local trade on the basis of the merits of his goods and service. It is a policy consistent with his own and the public interest, and one that expresses all there is in the way of gain to anyone concerned. The better merchants find this policy the only available one when they grow to the extent of expanding their markets into neighboring communities; for they cannot urge on their own townspeople what they do not advocate for others. The competent merchant loses by contending for community loyalty, since he commits himself to a division of his business with every merchant, productive or unproductive, native or outlander, who cares to set up a local establishment. He does the community an injury in urging upon them the support of the inefficient and the slothful in what amounts to an unwise philanthropy in the name of loyalty.

What goods in particular should be imported and what produced at home and exported is a matter determined by the circumstances that control the division of labor. The question brings us to a consideration of the gains of trade.

THE GAINS OF TRADE

Since it is possible by specialization to increase productivity and thus to lower the costs of production, there is economy in the division of labor and an advantage in trade, which is the outgrowth of the division of labor. There is no doubt of the fact that every individual is better qualified for certain productive activities than for others and is most productive when giving his attention principally to the things he can do best. Each specialized producer may be expected, therefore, to have more goods either for consumption or for trade than would be possible if he were to attempt to produce everything necessary to the satisfaction of his own wants. Even if it were assumed that some one person had ability superior in every way to that of other people, and that there was nothing which he might not do for himself at lower cost than others could do it for him, there would still be the possibility of increasing his productivity by specialization. His total product would be the greater if he were to concentrate his efforts upon some one or a few activities which he could do to especial advantage. He would gain by trading his surplus under

such circumstances, even though the goods he bought were produced by others at a higher cost than he might have produced them. The sellers of the goods he bought would also be enabled to reap the advantages of concentrated attention and developed skill in one line. Each would tend to select for himself the activity in which he was most efficient. The specialization of the one would thus permit a similar specialization of others with gains, in consequence, to all producers and consumers.

ABSOLUTE AND COMPARATIVE ADVANTAGES

Geographical divisions, and even human beings, possess in some instances an absolute advantage in the production of certain commodities or services. That country which possesses mineral resources not found elsewhere has an absolute advantage in that particular. Tropical countries produce goods which cannot be created in temperate climates. Certain individuals have talent that is extremely rare, and some develop skill that no competitor is able to acquire. There are no individuals or countries, however, which have an absolute advantage in all production. At best, one might have a comparative advantage in everything. On the other hand, one may be at a positive disadvantage in everything when compared with all other producers at once. One in a group of several can hardly have a monopoly of all resources and productive power, but one may be surpassed in every particular by different members of the group respectively.

Each producer is disposed to create a surplus of those commodities in the production of which he has an absolute or comparative advantage. He is able to produce these things at lower cost than others and can undersell all competitors. Only in case his supply is inadequate to meet the market demand may others sell the same goods. Those at a disadvantage in the point of their own greatest productivity create and sell goods or services which will not subject them to the competition of superiors, though naturally they may not prefer this specialization. Those at a general disadvantage must take just such opportunities as are left after others have selected their specialties. People and countries with superior ability and resources, respectively, may specialize to their own greatest gain. Those inferior in these particulars must adjust themselves as best they may in markets

largely preempted, though the result may be that they will not turn their energies in the direction of their greatest possible productivity.

The productive advantages of human beings arise from every source of intellectual and physical energy. The advantages of countries are derived from natural resources and the power of the economic personnel. The people of countries of great productivity generally have high incomes. The latter are the natural results of low costs, high productive output, and market advantage. The high incomes include high wages. The countries which have the advantage in the markets of the world are therefore countries of high wages.

High wage rates seem, at first thought, to be high costs, and there are many people seemingly fixed in the belief that low-wage countries can invariably undersell high-wage countries, even in the home markets of the latter. In referring to high wages in the paragraph above, we have meant a high rate of wages per person and high personal incomes to laborers. The wages which constitute a high cost are wages high in ratio to output. The wages paid at the highest rate per person, per hour, or per piece are not necessarily a high cost. They are only so when they bear too high a ratio to the value of the product. The explanation of the undisputed fact that the nations with the highest wage incomes and standards of living have for generations competed with those of lower standards and have enriched themselves in direct trade with the low-wage countries of the East lies in the fact that low wages are often high cost. The United States has been most successful, in the export trade, in selling the product of its high-wage industries, such as machinery, and has been very unsuccessful in the sale of certain other commodities produced by "cheap" labor. High wages are a result of the advantage we have in natural resources and in the superior intelligence and skill of our laborers; they are a cause also of the latter productive advantage.

THE ADVANTAGE OF A FAVORABLE MARKET

The advantage of low cost is of no use to a country which attempts to produce something not in demand. An absolute advantage consists only of the ability to produce something which

others cannot produce and which they desire. A comparative advantage, likewise, is efficiency in the production of goods which will sell in the market; from which it follows that if one produces that which is greatly in demand, an additional advantage results. There is no economic opportunity for the person or the country whose efforts, however effective in the simple production of goods, are not turned in the direction that the market requires, but there are exceptional gains to those who sell in a market of intense and active demand. It is a gain, secondly, to buy in a market that is relatively oversupplied. Let it be supposed that Chile were the only source of nitrates and that they were found near the surface and could be marketed at very little cost. Let it be supposed also that these nitrates were an important element in the making of fertilizers for use in the older agricultural countries. Chile would have an important advantage in her commerce with other countries. If, however, other countries could offer nothing to Chile of very great importance in her economic life and were compelled to sell commodities in competition with each other, the result would be that nitrates would exchange at a very high rate for the miscellaneous commodities which are offered in exchange.

The advantages of trade in particular instances are just such advantages as have already been revealed in the discussion of the law of price. Certain producers sell at low cost in markets where the ratio of demand to supply results in high prices. They gain most. Others produce at high cost and sell in unfavorable markets. These others gain least, though all gain.

THE TREND OF INTERREGIONAL TRADE

Natural advantages and accomplished specialization govern the trade relations which prevail in interregional commerce. Tropical and subtropical countries have an absolute advantage over temperate countries in the production of such commodities as coffee, cocoa, sugar, citrous fruits, and rubber. Temperate regions, being more highly developed than those of the tropics, offer manufactured goods, such as textiles, in exchange for the natural products of the latter. The result is the so-called north and south trade, of constantly growing importance in the world's business. Regions which produce minerals cheaply and in great quantities

are in a position to establish trade with countries which need raw materials for manufacture. Thus, the East Indies supply tin to European countries; Persia and Mexico supply petroleum. Regions with productive grain lands, such as Russia, have a basis of trade with centers of manufacture, such as the North Sea countries of Europe. These are cases of absolute advantage, and the trade which results may be expected to be comparatively permanent.

Regions newly opened to enterprise are inclined to specialize in agricultural products and other raw materials because the supply of land is relatively abundant. They are able to produce at low cost and even at decreasing cost. They trade with countries having established industries where supplies of highly specialized labor are available for manufacturing. The trade between Australia, New Zealand, Argentina, and Canada on the one hand, and Europe and Eastern America on the other, illustrates this phase of commerce. This trade tends to disappear as the new lands come to economic maturity. Trade develops, also, between lending and borrowing countries. Those with accumulated surpluses put them to the use of poorer or newer countries the industries of which are poorly supplied with capital but which have undeveloped resources. Some of the regions where these investments are placed are old countries in point of time and civilization, but new in economic development in the modern sense. The lands bordering the North Atlantic make investments in Oriental countries, in Siberia, South America, and Africa and pay in this way for the raw materials exported from those regions. Such trade as this is relatively temporary, since lending to particular countries cannot be continued interminably and new regions become old and cease to have surpluses of raw materials and food.

The most permanent trade and that which is, after all, greatest in amount is that which takes place between two developed countries. It is based upon a specialization such as that which exists among people in any one community. It does not rest upon superiority or inferiority, but upon the economic principle that division of labor is economical. The greatest trade of the prewar period was that of England, France, Germany, and other north European countries among themselves, and the trade between the various North American states.

THE RESTRICTION OF INTERNATIONAL TRADE

The most prevalent restriction upon international trade is the protective tariff, which is a duty, or tax, levied upon the importation of goods and intended to protect local enterprises which are unable to meet foreign competition. Foreign producers who pay the tax find they must sell at higher prices and lose some at least of the advantage they have had over local producers. The result, if the tariff is truly protective, is that importations cease and local producers are freed from external competition. The general consequences of any such trade restrictions are, first, a modification of the international division of labor. If imports decline, exports must decline to the same extent. Each country is then thrown back more completely upon its own resources. Secondly, local production is put upon a less economical basis. Labor and capital are diverted from productive undertakings to enterprises admittedly unable to meet foreign competition and to maintain themselves unaided in the world market. The specialization to which the country is best adapted economically is thus sacrificed, and the gains of specialization are lost. One can find no economic advantage in the protective policy arising even from the resulting diversification of production; for in so far as diversification is economical, it reduces costs of production and, therefore, cannot so hamper enterprise as itself to give occasion for protection. There is, in general, no essentially economic gain in the restriction of normal and well-ordered trade.

Nevertheless, there may be circumstances in which a protective policy might serve to promote economic welfare. There is some gain possibly in hastening the development of infant industries which are certain to succeed if given temporary protection against very severe or unfair competition. Local traders also may suffer such abuses at the hands of foreign competitors as result from the "dumping" of goods by the latter in the local market. Great quantities of goods are sometimes supplied at very low and even unprofitable prices as a means of relieving the foreign markets of an oversupply or simply as a measure of competition against the local producer whom his foreign competitors hope to destroy completely. In some instances foreign governments have encouraged such competition by giving their exporters bounties to enable them to undersell others abroad. The need for protection arises,